THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

EDITORIAL STAFF

WARREN L. BAKER
Editor
J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS

L. J. LOGAN — BRAD MILLS
WM. V. GROSS

DISTRICT EDITORS

B. F. LINZ.....Washington
GRADY TRIPLETT } .....Tulsa
FRANK TAYLOR }
H. H. KING.....Fort Worth
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
CHAS. LEYENDECKER.....Houston

PUBLISHED BY

THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*

Staff correspondents at all important points.

Member Audit Bureau of Circulation
Member Associated Business Papers, Inc.

BRANCH OFFICES

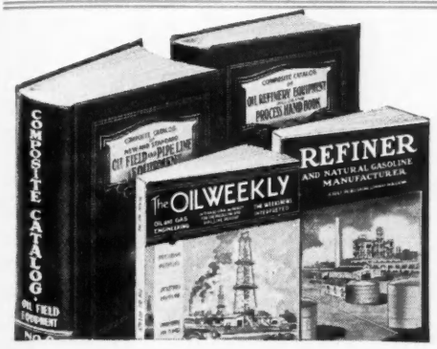
NEW YORK.....250 Park Ave.
PITTSBURGH.....Vandergrift Bldg.
CHICAGO.....32 S. Michigan Ave.
LOS ANGELES...W. W. Wilson Bldg.
TULSA.....Hunt Bldg.
FORT WORTH.W. T. Waggoner Bldg.
SAN ANTONIO.....233 Bedell Bldg.
WASHINGTON.....Albee Bldg.

ADVERTISING STAFF

DICK SWINSKY.....New York
A. W. BROWNELL, JR.....New York
C. A. WARDLEY.....Pittsburgh
H. G. FITZPATRICK.....Chicago
J. F. CARTER, JR.....Tulsa
JAY CURTS, JR.....Los Angeles
CHAS. WYATT.....Houston

CIRCULATION DEPARTMENT

J. T. WAGONER.....Manager



SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

The Oil Man's Calendar

JULY 27-28	**West Virginia Oil and Natural Gas Association, Charleston, West Virginia.**
SEPT. 14-16	**National Petroleum Association, Hotel Traymore, Atlantic City.**
27 OCT. 2	**American Association of Petroleum Geologists, Mid-Year Meeting, El Paso, Texas.**
OCT. 6-7	**American Institute of Mining & Metallurgical Engineers, Fall Meeting, Petroleum Division, San Antonio, Texas.**
10-14	**American Gas Association, Atlantic City, New Jersey.**
12-13	**Indiana Independent Petroleum Association, Hotel Severin, Indianapolis, Indiana.**
18	**National Stripper Well Association and Oklahoma Stripper Well Association, Annual Meetings, Tulsa, Oklahoma.**
19-21	**Independent Petroleum Association of America, Tulsa, Oklahoma.**
20-21	**American Institute of Mining & Metallurgical Engineers, Petroleum Division and Industrial Minerals Division, Los Angeles, California.**
27-29	**Annual Convention, Texas Division, Mid-Continent Oil & Gas Assn., San Antonio, Texas.**
NOV. 14-18	**American Petroleum Institute, (Annual), Stevens Hotel, Chicago.**
DEC.	**Mid-Continent Oil & Gas Assn., Standing Tax Committees, Dallas, Texas.**

Contents « July 18, 1938

Volume 90, Number 6

The Changing Panorama.....9-10

Feature Section.....13

Oil Industry Outlook Favorable for Latter Half of Year.....13
BY L. J. LOGAN

Relatively Aggressive Drilling Likely to Continue.....16
BY L. J. LOGAN

The Life of a Core (Pictorial Story).....19
BY DENIS S. SNEIGR

Methods for Determining the Hydrogen Sulfide Content of Natural Gas.....28
BY FRANK PATTEN

Economic Factors Control Pennsylvania-New York Activity.....35
BY FRANK B. TAYLOR

News Section and Index.....45

Men in the Industry's News.....43

World Developments.....40

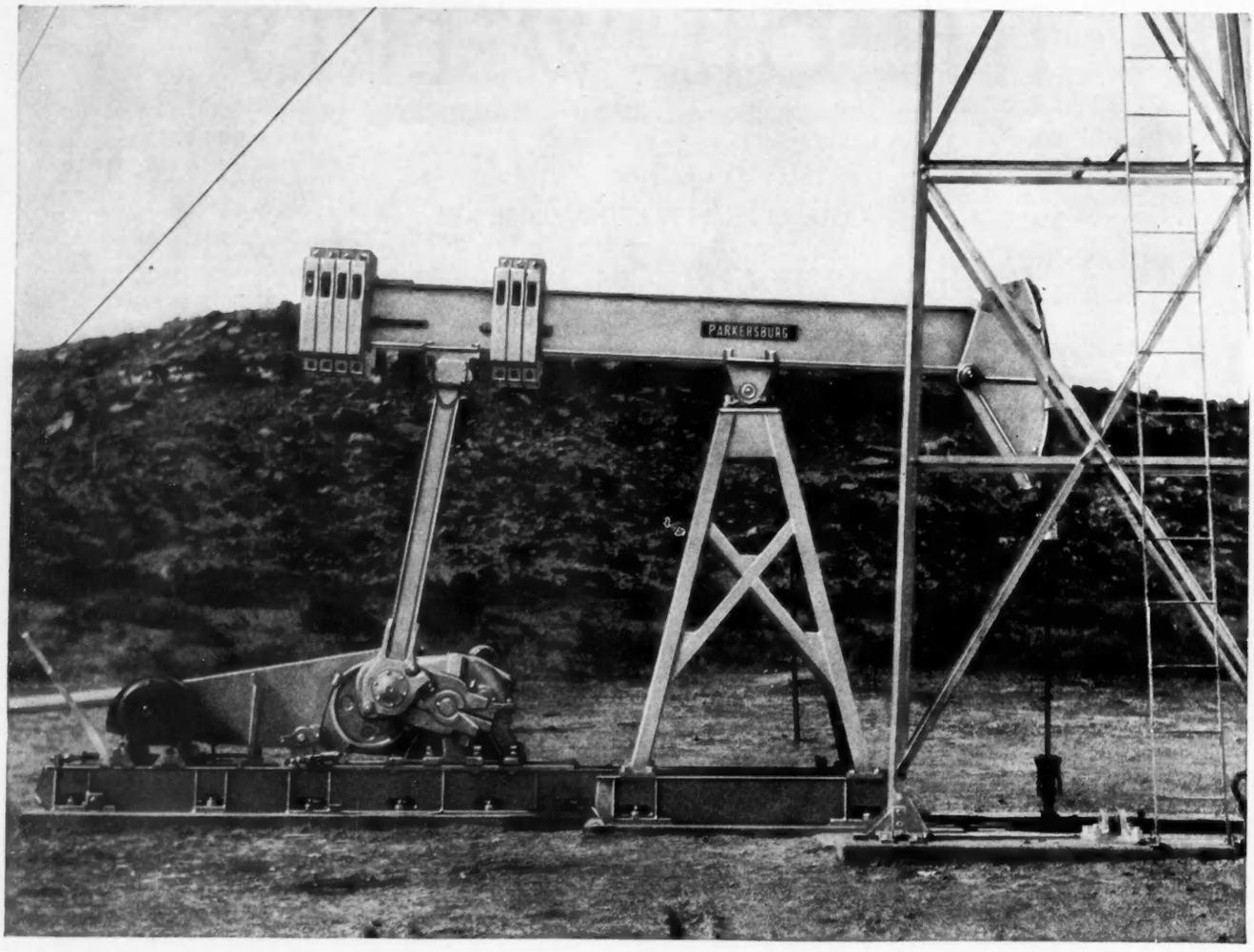
Squeaks from the Bull Wheel.....81

New Products for the Field.....76

Manufacturer's News.....79

Published every Monday. Single Copies 15 cents (Special Issues 50c). Subscription price: domestic and foreign, $2.00 a year; 2 years $3.00. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies. Advertising rates on application.

Copyrighted 1938, by The Gulf Publishing Company.



Note

THESE FEATURES

Oversize, flood-lubricated bearings.

●

Reinforced sills at anchor bolt foundations.

●

Leveling screws in base.

●

Split hub cranks with set screws for spreading hub.

●

"Banjo" Type Pitmans.

●

Split Nuts on engine adjusting screws.

●

Adjustable saddle bearings.

Compare their - DESIGN, QUALITY OF MATERIALS AND CONSTRUCTION

Parkersburg Pumping Units are designed to offer greater economy and more dependable performance. That's why their engineering and construction is so much finer. Experience has taught us that quality must be built into every detail if pumping units are to deliver the utmost economy and performance. Ask your Parkersburg representative for complete details . . . make your own comparisons. You owe it to yourself if you want the greatest possible returns on your pumping unit dollar.

PARKERSBURG PUMPING UNITS

THE PARKERSBURG RIG AND REEL COMPANY, PARKERSBURG, W. VA.

DALLAS . . HOUSTON . . TULSA . . LOS ANGELES . . NEW YORK

This Week's Panorama

THE petroleum industry now has reached a stage where too much optimism might precipitate market difficulties and where caution is needed in regulating the output of wells and refineries.

Curtailment Now Less Strict

The industry in the past two months has greatly improved its inventory situation and its market base, through drastic curtailment of crude oil production and refinery runs. Crude prices have been bolstered, and the prices of gasoline and kerosene have recovered portions of the ground lost last fall and winter.

But crude curtailment has been materially loosened, under July allowables, and refinery operations likely will expand with the wider opening of wells.

Crude Production Up Sharply

Already the crude production has jumped greatly, having been nearly a quarter of a million barrels daily higher in the week ended July 9 than in the previous week, in averaging 3,296,250 barrels a day.

The new production level was 6.4 percent lower than that at the comparable time last year. But that was no great consolation, as the industry last summer was producing too much crude.

Refinery Runs Unchanged

Refinery runs of crude oil continued unchanged at 3,095,000 barrels daily in the week ended July 9, and were 6.9 percent lower than in the corresponding week last year.

But the question is whether or not plant activity can be held down satisfactorily, with the wells feeding more crude oil into the pipe line systems.

Gasoline Situation Favorable

With the refinery runs still moderate, gasoline production continued sufficiently low in the week ended July 9 to permit withdrawal of about 750,000 barrels more from gasoline storage, following unusually large reductions in several preceding weeks.

The new decrease lowered the United States gasoline inventories to 79,893,000 barrels, and they then were only 7.9 percent higher than at the corresponding time last year. At their all time peak of 93,192,000 barrels four months ago, on March 19, the gasoline stocks were about 20 percent larger than one year previously.

Material improvement has been made, therefore, in the previously unfavorable gasoline inventory situation, although there is still considerable room for improvement, as gasoline demand has continued to run only around the same levels as last year, with no material increase in prospect for the next several months.

While the gasoline situation has been improved, there has not occurred any betterment of the fuel oil situation. Inventories of those oils continue to increase seasonally, although they already are unusually large. They rose more than 1,500,000 barrels in the week ended July 9, and then were 35.8 percent above the level of a year before.

The stocks have expanded greatly in recent months because of sub-normal consumption, resulting from reduced industrial activity. And no material improvement in fuel oil consumption is in immediate prospect. Consequently, the outlook for early betterment of the fuel oil inventory situation is not promising, particularly in view of the current larger production of crude oil.

Market Advances Halted

Perhaps significantly, there has occurred within the past week or 10 days, along with the loosening of curtailment, a slowing down of the industry's markets. Gasoline prices have halted and wavered, after having advanced steadily for several weeks previously, and in some instances tank car quotations have been marked back down an eighth cent a gallon.

However, the recent improvement of prices at the refineries has been distinctly encouraging, although it has not canceled all the decline of last fall and winter.

The crude oil markets remain generally stable, and the maintenance of established postings in coming months appears fairly well assured.

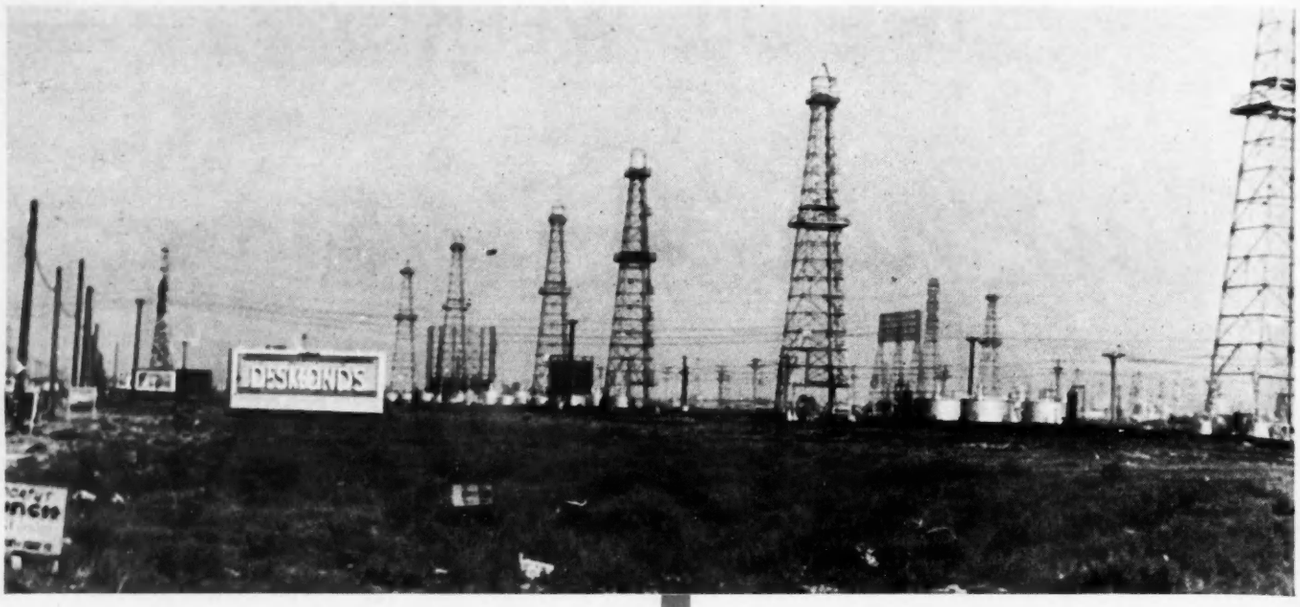
Nevertheless, there are even now some local weak spots in the crude market, as evidenced by: (1) reductions last week in postings of two Wyoming fields and a Texas Gulf Coast field, (2) current depressed prices for Pennsylvania grade crude, (3) Pure Transportation Company's action early last week inaugurating pipe line proration of purchases in the Healdton field of Southern Oklahoma.

It is conceivable that other weak local situations may develop in coming weeks, because of lately increased production, although it is anticipated that national crude production in July will conform closely with market requirements, as allowables approximate the indicated demand.

As Seen by Others

Oil company securities have continued in favor in stock market trading, because of the industry's relatively good situation and outlook.

Several statistical services and brokers' reports



Oil pays for railroad. Some months ago Union Pacific Railroad Company discovered oil on its holdings in the Wilmington-Long Beach Harbor field, and thereupon started a development second to none in the Los Angeles Basin. Experts have estimated enough oil will be produced from Union Pacific's acreage to pay for the upkeep, construction and other expenses for the entire railroad system. This picture shows a row of Union Pacific wells on the south side of Anaheim Boulevard, and tank farms in the background.

lately have sung the praises of the oil industry, pointing out the improved inventory situation, effective control of crude production and refinery operations, the stable oil markets, and improving prices.

Concerns that have issued such favorable reports have included Carl H. Pforzheimer & Company, Fenner & Beane, and Poor's Publishing Company.

In a comprehensive survey of the petroleum industry, issued recently, Poor's summarized the outlook as follows:

"Demand factors remain relatively favorable in the petroleum industry. In 1938, neither crude oil nor its derivatives are likely to show any marked decline in sales volume from the 1937 highs. Supply factors, however, are mixed, with an over-abundance of motor fuel, and especially fuel oil, contrasting with a relative shortage of crude. Price trends in the industry's divisions reflect the individual demand-supply factors. Profits reflect price trends, with refiners the least advantageously situated, producers in the best position and integrated companies in between."

Concerning the basic position of the industry, the Poor's survey stated:

"Fundamentally, the importance of oil cannot be questioned. Whether in war or in peace, the world depends heavily upon that commodity. The business, in all its divisions, has become more and more concentrated in the hands of the dominant companies, the majority of which have been soundly conceived, conservatively financed, and judiciously equipped with adequate operating facilities."

Asphalt Demand Up in 1937

Domestic and foreign demand for asphalt was 2½ percent larger in 1937 than in 1936, according to the final report on that product by the Bureau of Mines.

To meet substantial increases in both domestic and foreign demand, petroleum refineries in the United States increased their asphalt output 294,302 short tons in 1937, or to 4,359,924 tons. Imports also were larger. Stocks were 193,247 tons larger at the end of 1937 than a year before.

Indicated domestic demand in 1937, totaling 4,049,303 short tons, was 2 percent larger than in 1936, although requirements declined in the latter part of the year. For the first 7 months of 1937, apparent demand was 15 percent larger than in the corresponding months of 1935. After a decline in August and a rally in September, the last quarter of 1937 closed with an indicated demand 15 percent less than in the corresponding quarter of 1936.

Tractor Fuel Preferences Vary

A recent report in the monthly bulletin of the Iowa Independent Oil Jobbers' Association reflected the relative popularity of different fuels for tractors.

In polling 1300 tractor-owning farmers, the association found that over 50 percent of the owners favored gasoline for fuel, 18 percent favored distillate, and 16 percent kerosene.

The survey also reflected popularity of rubber tires and high compression motors.

Diesel Engines for Trucks and Buses

In the United States, a great deal is being said but not so much done about substituting Diesel powered trucks and buses for those employing gasoline motors. Such switching is not so urgent, in view of the relatively low U. S. fuel prices.

But in some other countries, the Diesel driven vehicles are popular, because they consume relatively small quantities of fuel, and therefore operate economically, the costs of fuel being comparatively high.

According to a recent report, 2800 omnibuses in London, England, out of a total of 6300 in operation, had been equipped with Diesel engines, and further changing over was taking place at the rate of 400 to 500 units annually.

Oil Industry Outlook Is Favorable For Latter Half of Year

Future is promising, in view of general expectations of early business revival and lately improved situation within the oil industry . . . Active operations and expansion contemplated

By L. J. LOGAN, Associate Editor

As the petroleum industry enters the latter half of the year, it faces cheerful prospects, indicating that 1938 as a whole may prove relatively successful, despite some difficulties encountered in the early months.

Basically, hopefulness regarding the industry's future appears justified because of the pronounced revival of cheerful business sentiment in recent weeks, which has accompanied the sharp rise in the stock market and the upturn of numerous business indicators.

There is wide and confident expectation that business in general will be better in coming months, because of the government lending and spending and possibly because of natural economic recovery. And these cheerful expectations, in themselves, probably will tend to bring about business betterment.

Industry's Situation Good

Moreover, general business improvement is about all that the petroleum industry requires for the restoration of healthy and prosperous conditions within the industry.

For throughout the present recession, the chief difficulty that the petroleum industry has had to contend with has been the slight, yet unsettling, interruption of the normal, rising trends of oil consumption—not any great actual decline in demand. In reality, total petroleum demand has been running nearly as large in 1938 as in 1937, and thus the volumes of business available to oil companies have continued heavy. But in recent years the normal trends of oil consumption have not been merely stationary, but consistently upward—until the recession commenced. And the problem that the oil industry has had to face in the past year has been not a sharp curtailment of supply but merely a cessation of the former steady expansion of supply—a slowing down to a more constant, although still rapid, stride.

Fall Brought Trouble

Actually, the interruption of the growth of oil consumption late last summer and early last fall was at first hardly perceptible, and the recession forces were at work some months before it was generally recognized that oil supply was outrunning demand and that a readjustment of the supply factor was needed.

When this need was finally recognized, it was met by more conservative crude oil production and refinery runs, but by then surplus inventories, particularly of gasoline, had accumulated. And the industry had to contend with those surpluses as well as with the less favorable current demand.

Because of those difficulties, prices of gasoline at the refineries weakened, markets for some other products became unsteady, and crude oil prices were in jeopardy.

Meanwhile, however, determined efforts were put forth toward properly readjusting crude oil production and refinery runs, and consumption trends were closely watched, with the result that a measure of stability was consistently maintained, although conditions became critical at times.

Thus the industry so far has weathered the recession without suffering reductions of crude oil prices, although its earnings have been adversely affected by the decline of gasoline prices.

However, in May and June exceptionally drastic curtailment of crude production and refinery runs was resorted to, and much improvement in the industry's statistical position resulted, large reductions having been made in the previously excessive above-ground inventories of oils. Concurrently, improvement of the markets occurred, and a considerable part of the ground lost by the gasoline market in the autumn and winter was regained.

Thus the industry now is in a relatively good inventory position, while current operations, at wells and refineries, remain comparatively strict, indicating that the markets will continue stable and possibly show some additional improvement in coming months.

Consequently, the outlook for

the oil industry now is promising not only because of the favorable general business prospects but also because of improved conditions within the industry itself.

Earnings Relatively Good

In the first half of 1938, profits of oil companies, in the aggregate, were probably around 30 percent lower than in the corresponding period of 1937, having held up better than those of concerns in many other lines. Some oil company executives in recent months have indicated that the earnings for all this year might be similarly under those of last year. But it now appears possible, in view of recently improved conditions and prospects, that the 1938 results, as a whole, actually may make a closer approach to those of 1937.

Primarily responsible for the smaller earnings in the initial half of 1938 than in the first six months of 1937 was the lower level of gasoline prices, inasmuch as volumes of business held up well.

Consequently, results varied among individual companies, largely as they were affected by the gasoline situation. Solely producing companies have maintained earnings virtually as good as those last year, and integrated companies well fortified with their own crude production have fared relatively well. But companies buying all or large proportions of their crude requirements have suffered financially, paying the long-established prices for crude while receiving reduced prices for gasoline.

The latter groups of companies have been benefited, however, by the substantial improvement in refinery prices of gasoline in recent weeks, and they possibly will be further aided by additional betterment of the gasoline market.

The recently improved gasoline market promises, consequently, to have a favorable effect on the 1938 earnings of the industry as a whole.

Oil Demand Stable

Although the demand for petroleum in the first half of 1938 was below most expectations at the beginning of the year, it held up remarkably well, in the face of the marked slowing down of general business activity. As the year opened, it was variously estimated that petroleum demand in 1938 would be from 3 to 6 percent larger than in 1937. But figures made public by the Bureau of Mines a week ago indicated that the total demand for United States oils in the first 5 months of 1938 actually was 4/10 of 1 percent smaller than in the corresponding period of 1937.

The demand had held up well in the first few months of 1938, but then it became less brisk, and relatively unfavorable trends continued at least through May. The total demand was 2.7 percent smaller in May this year than last year, having been less favorable than in April, when it was only 1.2 percent under last year's level.

The comparatively good demand for petroleum this year was made possible in part by exceptionally large exports, which exceeded even the more optimistic expectations. The brisk export business helped to cushion the effect of curtailed domestic demand.

In the first 5 months of 1938, exports of crude oil were 47.1 percent larger than in that period last year, having aggregated 32,753,000 barrels, as compared with 22,264,000 barrels. And exports of refined products were 17.7 percent larger this year than last year, in the 5 months' period, totaling 46,905,000 barrels, against 39,852,000 barrels.

In May, however, the exports showed smaller gains over a year before, crude oil shipments having been up 14.7 percent and refined oil exports 13.6 percent.

In contrast with the increases in exports, domestic demand for petroleum has been running lower this year than last year. The total domestic requirements in the first 5 months of 1938 were 4.2 percent smaller than in the similar period of 1937, aggregating 444,895,000 barrels, against 464,391,000 barrels.

Moreover, through May, there had not occurred any material upward turn of the trends of consumption. The total domestic demand was 5.6 percent smaller in

Demand for Petroleum Relatively Good in First 5 Months of 1938, in View of Reduced General Business Activity

(These figures show supply and demand of all oils, in thousands of barrels, and are from the Bureau of Mines)

ITEM	MAY			FIRST FIVE MONTHS		
	1937	1938	Percent Change	1937	1938	Percent Change
New Supply:						
Domestic production—						
Crude petroleum	110,911	98,674	− 11.0	514,354	508,569	− 1.1
Daily average	3,578	3,183	− 11.6	3,406	3,368	− 1.1
Natural gasoline	3,988	4,196	+ 5.3	19,104	20,918	+ 9.5
Benzol[1]	249	117	− 53.0	1,224	667	− 45.5
Total production	115,148	102,987	− 10.6	534,682	530,154	− 0.8
Daily average	3,714	3,322	− 10.6	3,541	3,511	− 0.8
Imports[2]—						
Crude petroleum:						
Receipts in bond	254	277	+ 9.0	608	1,223	+101.1
Receipts for domestic use	2,384	1,804	− 24.3	8,434	9,232	+ 9.5
Refined products:						
Receipts in bond	1,720	1,539	− 10.5	8,665	7,746	− 10.6
Receipts for domestic use	716	401	− 44.0	4,167	2,681	− 35.7
Total new supply, all oils	120,222	107,008	− 11.0	556,556	551,036	− 1.0
Daily average	3,878	3,452	− 11.0	3,686	3,649	− 1.0
Increase in stocks, all oils	8,487	[3]1,651	− 80.5	30,049	26,483	− 11.9
Demand:						
Total demand	111,735	108,659	− 2.7	526,507	524,553	− 0.4
Daily average	3,604	3,505	− 2.7	3,487	3,474	− 0.4
Exports[2]—						
Crude petroleum	6,796	7,798	+ 14.7	22,264	32,753	+ 47.1
Refined products	9,404	10,681	+ 13.6	39,852	46,905	+ 17.7
Domestic demand—						
Motor fuel	45,484	44,911	− 1.2	195,150	196,461	+ 0.7
Kerosene	4,150	3,637	− 12.4	22,924	23,497	+ 2.5
Gas oil and distillate fuels	6,806	7,050	+ 3.5	51,205	49,630	− 3.1
Residual fuel oils	26,356	22,447	− 14.8	139,209	119,893	− 13.9
Lubricants	2,078	1,730	− 16.7	9,961	8,298	− 16.7
Wax	79	92	+ 16.4	448	480	+ 7.1
Coke	524	422	− 19.5	2,288	1,994	− 12.8
Asphalt	2,293	2,203	− 3.9	7,097	7,261	+ 2.3
Road oil	724	593	− 18.1	1,555	1,251	− 19.5
Still gas	5,539	5,542	+ 0.05	24,412	24,881	+ 1.9
Miscellaneous	191	143	− 25.1	954	715	− 25.0
Losses	1,311	1,410	+ 7.5	9,188	10,534	+ 14.6
Total domestic demand	95,535	90,180	− 5.6	464,391	444,895	− 4.2
Daily average	3,082	2,909	− 5.6	3,075	2,946	− 4.2
Stocks:						
Crude petroleum—						
Refinable in United States	308,209	298,983	− 3.0	308,209	298,983	− 3.0
Heavy in California	[4]	17,353	.....	[4]	17,353	.....
Natural gasoline	5,989	6,548	+ 9.3	5,989	6,548	+ 9.3
Refined products	234,497	267,585	+ 14.1	234,497	267,585	+ 14.1
Total, all oils	548,695	590,469	+ 7.6	548,695	590,469	+ 7.6
Days' supply	152	168	+ 10.5	157	170	+ 8.3

[1] From Coal Division. [2] Imports of crude as reported to Bureau of Mines; all other imports and exports, from Bureau of Foreign and Domestic Commerce. [3] Decrease. [4] Not available.

May, 1938, than in May, 1937; whereas it had shown declines of 5.9 percent in April, 3.6 percent in March, and 2.3 percent in February. However, even the fractional revival in consumption was encouraging.

While domestic demand for all petroleum has been lagging this year, certain products, including the heavy, industrial fuels and lubricants, have been hardest hit by the recession, while other products, including gasoline, have continued in comparatively good demand.

In the first 5 months of 1938, the domestic demand for gasoline was 7/10 of 1 percent larger than in that period last year, and in May it still was holding up well, having been only 1.2 percent lower than in May, 1937. In April the domestic gasoline demand was only 3/10 of 1 percent below the level of a year previously, and in March it was 1.7 percent above the 1937 level.

Kerosene consumption in the United States in the first 5 months of 1938 was 2.5 percent larger than in that period of 1937, although requirements in May were down 12.4 percent.

Domestic asphalt demand was up 2.3 percent for the first 5 months of 1938 but down 3.9 percent for May.

Wax was another product continuing to show increasing demand in 1938, registering gains of 7.1 percent for the initial 5 months and 16.4 percent for May.

Especially affected by the recession have been the residual fuel oils, used in industrial operations. The domestic demand for those oils in the first 5 months of 1938, aggregating 119,893,000 barrels, was 13.9 percent smaller than the requirements of 139,209,000 barrels in the corresponding period last year. In May, 1938, the demand for those oils was 14.8 percent smaller than in May, 1937.

In contrast, domestic demand for gas oil and distillate fuels, the lighter oils used for domestic purposes and so forth, has held up relatively well, having been only 3.1 percent smaller this year than last year. In May the demand for those oils was 3.5 percent above the comparable level last year.

Domestic consumption of lubricants has been lagging to about the same extent as the use of the industrial fuel oils. In the first 5 months of 1938, the lubricant demand was down 16.7 percent from the previous year and in May, also, it was off 16.7 percent.

Road oil consumption in the United States showed decreases of 19.5 percent for the first 5 months of 1938 and 18.1 percent for May.

Inventory Situation Favorable

While the trends of petroleum consumption have not been as favorable in 1938 as formerly, they have been recognized, and supply has been readjusted similarly, with fair success. In the past spring some difficulty was experienced in holding supply down in line with demand. But extraordinary curtailment finally was undertaken, and production and refinery runs were held sufficiently under current market requirements to permit the making of needed withdrawals from above ground storage. Consequently, the industry now occupies a materially improved inventory position, stocks being generally in favorable relation to requirements.

Gasoline stocks in the early months of the year caused much anxiety, having risen to an alarming all-time peak of 93,192,000 barrels on March 19. They then were about 20 percent larger than one year previously.

Subsequently, however, the gasoline stocks have been coming down, as the heavy consuming season has progressed. And in recent weeks, under the exceptionally strict program of curtailment at wells and refineries, unusually heavy withdrawals have occurred.

In the week ended July 9, the gasoline inventories in the United States came down further to 79,893,000 barrels, and were then only 7.9 percent above the level of 73,976,000 barrels at which they stood one year previously.

The gasoline stocks still are larger than desirable, as gasoline demand in recent months has been only about equaling last year's levels. But the present inventory situation is distinctly encouraging as compared with that a few months ago.

Crude oil stocks also were increasing in the early part of this year, but later were reduced substantially, particularly in May and June. While they rose from 303,468,000 barrels on January 1, 1938, to more than 307,000,000 barrels in the latter part of March, they subsequently came down consistently, declining by June 25 to 293,463,000 barrels, or to a level about 10,000,000 barrels lower than at the beginning of the year. The stocks on hand June 25 were 4.8 percent smaller than those held one year previously.

Fuel oil inventories present, however, a distinctly less favorable picture than gasoline and crude oil stocks. The fuel oil storage currently is showing the usual seasonal expansion for this time of the year, despite the fact it already is excessive. Total supplies in the United States on July 9 aggregated 140,587,000 barrels, and were 35.8 percent larger than the 103,537,000 barrels held a year before. Yet fuel oil consumption has been running lower this year than last year, as indicated above. In fact, the lagging of fuel oil demand has been largely responsible for the accumulation of surplus stocks.

If general business improves as expected, however, improvement of the inventory situation is to be expected. Moreover, the large fuel oil stocks involve a favorable implication insofar as they are related to gasoline production. In recent years, heavy fuel oil consumption and relatively low stocks have tended to stimulate refinery activity in fall and winter to an extent resulting in overproduction of gasoline. In the latter part of this year, in contrast, large stocks of fuel oil already on hand probably will tend to hold down refinery runs, and in the period when gasoline consumption is seasonally low, output also will be moderate. Thus there is a possibility that the fuel oil stocks situation may tend to hold down gasoline stocks and promote a stable gasoline market in the fall and winter.

Current Operations

While the inventories now are fairly satisfactory, the curtailment of supply that prevails in July is not quite as strict as that heretofore. Crude production has been increased materially, under less strict allowables, and it remains to be seen whether or not refinery runs will be held down moderately.

However, crude oil production probably will be fairly well in line with current requirements, and stocks likely will not increase much, if any, during the month, as allowables conform closely with the Bureau of Mines estimates of demand.

In view of the effective balancing of supply with demand in the initial 6 months of 1938, it appears quite likely that similarly successful control of operations will be achieved also in the latter half of the year.

Relatively Aggressive Drilling Is Likely to Continue

FOLLOWING the greater than seasonal increase in May, United States drilling continued comparatively aggressive during June, and it also is proving relatively heavy in July.

Apparently, the industry has fairly well recovered from the sinking spell that it experienced in March and April, when its courage declined to a low point, and is beginning to go ahead more confidently with substantial drilling programs.

It now appears quite possible that July may show more well completions per day on the average than did June, although drilling has declined slightly during July in some recent years.

This prospect for a July increase is indicated by the fact that 5.7 percent more rigs were in operation on July 1 than on June 1.

Latter Half Prospects

In view of the revival of drilling activity in May and June, the lately improved general business sentiment, and the present favorable conditions in the oil industry, it appears that drilling will hold up remarkably well throughout the latter half of the year.

A few months ago, in contrast, the drilling outlook was quite different, some retrenchment having set in, and no definite prospects of more aggressive development having yet manifested themselves.

Confidence Is Returning

Tending to confirm this forecast of relatively active field development in the latter half of 1938 are the indicated plans of various companies.

Unquestionably, many oil company executives have become decidedly more hopeful in the past several weeks regarding the business outlook, and some of them have publicly indicated the intention to go ahead with comparatively heavy programs of capital expenditures, including the spending of large sums for exploration, drilling, and acquisition of producing properties.

The largest oil company of the United States, Standard Oil Company (New Jersey), has just indicated that it contemplates making in 1938 total capital expenditures of $175,000,000, which would be the same as similar spending in 1937. Some weeks previously, the company's plans for 1938 were not quite so extensive, it was indicated.

Some other major companies also have indicated intentions of carrying out extensive expansion of producing, refining, marketing, and other facilities in 1938, having undertaken or studied important new financing.

Apparently, at least some of the oil companies propose now to go ahead with ambitious exploration, drilling, and expansion programs that were planned at the beginning of the year, after having wavered for a while, especially in March and April, in proceeding with the original plans.

Furthermore, such returning confidence is contagious, and it is likely to spread throughout the industry. For as some of the large concerns exhibit the courage to go ahead with normal operations and normal expansion, others will be encouraged to do likewise.

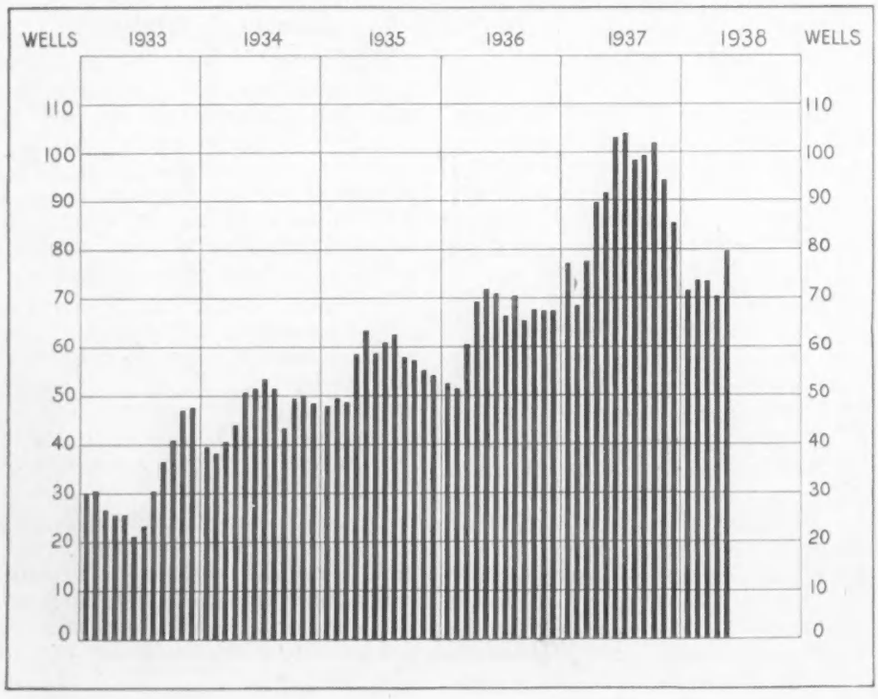
Improvement Promotes Drilling

The more aggressive drilling of the past few months apparently has resulted, largely, from two circumstances: (1) the general revival of hope in the business world lately, and (2) the noteworthy betterment of the situation and outlook of the oil industry itself since April.

Viewing the stock market rise and the upturn of various business indicators, many industrial leaders, including oil men, naturally have been led to believe that better business opportunities were in store, and have taken more aggressive attitudes.

But the conditions within the industry itself also have become

Average Number of Wells Completed Daily in U. S.
(By Months, January, 1933 — June, 1938)



more conducive to forward-looking plans and confident procedure. Whereas there were definite threats of crude price reductions in the early spring, drastic curtailment of crude production and refinery runs subsequently has been achieved, substantial proportions of surplus oil inventories have been wiped out, markets have been stabilized, crude prices have been saved, and refined product prices have been improved. The conditions and outlook obviously now are much more conducive than previously to the drilling of additional wells, as there is now greater assurance that favorable markets and prices may be maintained for a reasonably extended period.

Following revival in May, field activity remains comparatively brisk in June and July . . . Further extensive development is indicated by plans of oil companies for capital expenditures this year

By L. J. LOGAN, Associate Editor

First Six Months

In the first 6 months of 1938, well completions in the United States totaled 13,688, or 11.1 percent fewer than the 15,406 wells finished in the first half of 1937.

This decline resulted from the more conservative trends of development after February, the field work having held up above comparable 1937 levels in the first two months of the year.

However, a perceptible revival of drilling occurred in May, and June also brought relatively active development.

Completions in the whole country in June averaged 79.1 wells daily, or only fractionally less than the 79.7 daily in May.

The drilling activity of June was, however, about 30 percent lower than that of June, 1937, which was an unusually active month of an unusually active year, with completions averaging 103.3 daily.

Some Areas Gain

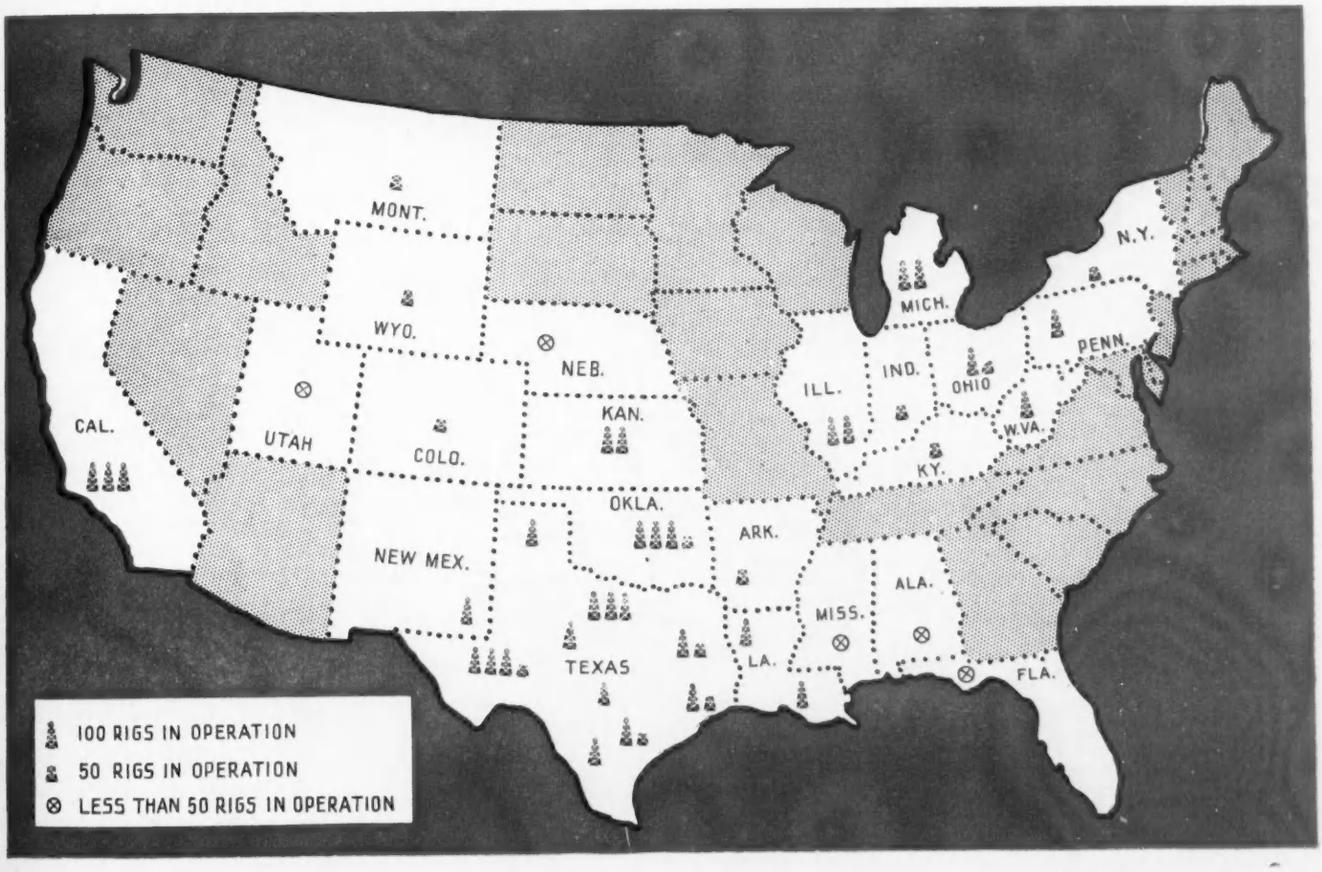
Although the country as a whole has had less drilling this year than last year, some important districts have shown increases.

Illinois, Arkansas, and North Louisiana have had the most conspicuous increases in drilling, but gains have occurred also in the Louisiana Gulf Coast, the Texas Gulf Coast, North Texas, the East Texas field, Kentucky, and Mississippi.

Drilling was lower in the first half of 1938 than in the initial half of 1937 in the remaining states and districts, including: Colorado, Indiana, New York, Ohio, Pennsylvania, West Virginia, Kansas, Michigan, Montana, New Mexico, Oklahoma, Wyoming, Eastern Texas outside the East Texas field, Southwest Texas, the Texas Panhandle, West Texas, and West Central Texas.

Details of completions, by states

Rigs in Use Total 3830 on July 1, Following Increase in June



Drilling Activity Increases During June

STATE OR DISTRICT	TOTAL RIGS IN OPERATION (Drilling, Rigs Up, Shut Down) April 1, 1938	May 1, 1938	June 1, 1938	July 1, 1938	Percent Change of July 1 from June 1	DETAILS OF JULY 1, 1938, ACTIVITY Rigs in Operation: Drilling	Rigs Up	Shut-down	Prelim. Activity: Der-ricks	Loca-tion	Total Oper-ations
Arkansas	51	44	46	53	+ 15	39	7	7	10	19	82
California	401	388	322	302	− 6	257	6	39	69	58	429
Colorado	25	26	11	38	+245	22	3	13	2	2	42
*Eastern States	663	641	686	787	+ 15	430	155	202	73	55	915
Illinois	130	157	175	209	+ 19	71	49	89	41	20	270
New Fields	72	97	111	136	+ 22	49	35	52	23	7	166
Rest of Illinois	58	60	64	73	+ 14	22	14	37	18	13	104
Indiana	30	25	27	36	+ 33	16	2	18	1	7	44
Kentucky	55	54	62	70	+ 13	41	9	20	12	17	99
*New York	51	52	50	90	+ 80	37	30	23	...	...	90
Ohio	148	138	140	148	+ 6	88	28	32	7	4	159
*Pennsylvania	125	99	132	126	− 4	101	25	...	...	...	126
West Virginia	124	116	100	108	+ 8	76	12	20	12	7	127
Kansas	256	262	187	204	+ 9	172	24	8	19	12	235
Louisiana	211	233	237	210	− 11	174	15	21	20	35	265
North Louisiana	89	100	114	91	− 20	67	10	14	10	16	117
South Louisiana	122	133	123	119	− 3	107	5	7	10	19	148
Michigan	172	173	169	194	+ 15	107	32	55	14	24	232
Montana	42	51	21	41	+ 95	15	3	23	1	2	44
Nebraska	3	3	1	4	+300	2	1	1	...	1	5
New Mexico	133	114	112	117	+ 4	83	5	29	2	19	138
Oklahoma	360	358	315	349	+ 11	301	37	11	19	15	383
Southeastern States	20	20	22	21	− 4	6	1	14	6	3	30
Alabama	4	4	3	4	+ 33	1	1	2	...	1	5
Florida	4	4	4	4	.....	2	...	2	2	...	6
Georgia	...	1	...	...	.....	...	...	...	...	...	...
Mississippi	12	11	15	13	− 13	3	...	10	4	2	19
Texas	1,602	1,607	1,465	1,448	− 1	1,112	83	253	97	331	1,876
East Texas Field	100	71	73	64	− 12	44	5	15	15	10	89
East Texas Border Co.'s	32	36	34	31	− 9	18	6	7	3	4	38
Rest of East Texas	44	43	51	47	− 8	30	3	14	6	6	59
North Texas	308	356	267	304	+ 14	244	12	48	14	93	411
South Texas	393	344	333	329	− 1	251	32	46	23	90	442
Corpus Christi Area	229	177	167	163	− 2	133	14	16	11	51	225
Laredo Area	99	96	81	77	− 5	54	10	13	7	21	105
San Antonio	65	71	85	89	+ 5	64	8	17	5	18	112
Texas Gulf Coast	155	156	160	157	− 2	145	7	5	14	47	218
Texas Panhandle	128	139	120	107	− 11	76	10	21	3	12	122
West Texas	389	386	340	326	− 4	260	7	59	16	59	401
West Central Texas	53	76	87	83	− 4	44	1	38	3	10	96
Utah	6	6	1	6	+500	3	1	2	1	1	8
Wyoming	65	61	27	56	+107	26	5	25	3	4	63
*Total United States	3,990	3,987	3,622	3,830	+ 5 7	2,749	378	703	336	581	4,747

* Data for New York and Pennsylvania prior to July, revised.

and districts, for June and the first 6 months of 1938 appear in an accompanying table, which also embodies comparisons with results last year.

Rigs in Operation

Rigs in operation in the United States increased 5.7 percent during June, rising from 3622 on June 1 to 3830 on July 1. These figures include wells drilling, rigging up, or temporarily shut down. The details of activity, by states and districts, are presented in another table.

Additional rigs came into use during June in numerous districts, including: Arkansas, Colorado, Illinois, Indiana, Kentucky, New York, Ohio, West Virginia, Kansas, Michigan, Montana, Nebraska, New Mexico, Oklahoma, Alabama, North Texas, the San Antonio district of South Texas, Utah, and Wyoming.

On the other hand, active rigs decreased during June in various areas, including: California, Pennsylvania, North Louisiana, South Louisiana, Mississippi, the East Texas field, the rest of Eastern Texas, the Corpus Christi and Laredo districts of South Texas, the Texas Gulf Coast, the Texas Panhandle, West Texas, and West Central Texas.

Completions and Production for First Six Months Decrease Further

STATE OR DISTRICT	†JUNE, 1938, COMPLETIONS AND CRUDE OIL PRODUCTION Total Wells	Oil	Gas	Dry	Initial Production	Production for June	COMPLETIONS AND PRODUCTION IN FIRST SIX MONTHS, 1938 AND 1937 WELLS COMPLETED: 1938: 6 Mo.	1937: 6 Mo.	Percent Change	DETAILS OF 1938 DRILLING: Oil	Gas	Dry	Initial Production	BARRELS PRODUCTION: 1938: 6 Months	1937: 6 Months	Percent Change
Arkansas	21	18	1	2	17,512	1,355,150	115	41	+180	95	1	19	87,916	8,497,100	4,919,600	+73
California	96	78	1	17	94,975	20,088,600	672	718	− 6	530	6	136	551,128	128,305,700	111,638,200	+15
Colorado	1	.....	.....	1	.....	116,000	5	6	− 17	2	.....	3	510	729,450	728,700	+ 0 01
*Eastern States	513	377	72	64	17,152	4,269,600	3,163	3,405	− 7	2,136	558	469	106,716	25,410,200	21,090,300	+20
Illinois	72	61	1	10	13,140	.....	444	58	+665	330	4	110	91,363	.....	.....	.....
Indiana	8	3	3	2	100	.....	54	58	− 7	11	16	27	496	.....	.....	.....
Kentucky	52	27	7	18	2,926	.....	326	131	+149	158	71	97	7,284	.....	.....	.....
*New York	59	53	5	1	192	.....	385	546	− 29	350	26	9	561	.....	.....	.....
Ohio	76	23	30	23	351	.....	438	704	− 38	124	181	133	2,392	.....	.....	.....
*Pennsylvania	205	197	6	2	216	.....	1,175	1,473	− 20	1,098	48	29	4,005	.....	.....	.....
West Virginia	41	13	20	8	227	.....	341	435	− 22	65	212	64	615	.....	.....	.....
Kansas	136	98	5	33	109,886	4,496,950	888	1,200	− 26	614	41	233	709,599	30,216,550	33,721,250	−10
Louisiana	105	80	6	19	40,571	7,811,850	527	401	+ 31	366	26	135	191,018	46,660,150	44,743,950	+ 4
North Louisiana	59	46	6	7	23,026	2,369,250	255	173	+ 47	209	18	26	120,850	14,306,450	13,632,550	+ 5
South Louisiana	46	34	.....	12	17,545	5,442,600	272	228	+ 19	155	8	109	70,168	32,353,700	31,111,400	+ 4
Michigan	74	43	1	30	7,659	1,647,550	400	412	− 3	248	10	142	47,123	9,480,350	6,894,050	+37
Montana	2	2	.....	.....	135	427,250	26	76	− 66	16	4	6	5,930	2,441,000	2,908,200	−16
New Mexico	44	39	1	4	18,575	2,721,550	250	349	− 28	218	5	27	133,730	18,494,250	18,832,200	− 2
Oklahoma	182	115	8	59	15,105	12,879,850	1,081	1,521	− 29	705	73	303	151,041	89,520,600	113,599,100	−21
Southeastern States	2	.....	2	.....	.....	.....	15	7	+115	1	3	11	240	.....	.....	.....
Alabama	...	.....	...	.....	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....
Florida	...	.....	...	.....	.....	.....	...	...	.....	.....	.....	...	.....	.....	.....	.....
Georgia	...	.....	...	.....	.....	.....	1	...	.....	.....	.....	1	.....	.....	.....	.....
Mississippi	2	.....	2	.....	.....	.....	11	6	+ 83	.....	2	9	.....	.....	.....	.....
Tennessee	...	.....	...	.....	.....	.....	2	...	.....	1	1	...	240	.....	.....	.....
Texas	1,032	780	17	235	1,169,087	35,696,550	6,505	7,217	.....	4,961	187	1,357	7,918,105	231,812,500	246,454,950	− 5
East Texas Field	148	145	.....	3	810,234	10,913,950	1,147	1,057	+ 8	1,122	.....	25	5,769,929	75,929,950	82,581,750	− 8
Rest of East Texas	35	21	.....	14	9,972	2,729,300	263	521	− 49	169	14	80	82,144	17,024,650	20,870,600	−18
North Texas	233	162	1	70	85,683	2,125,400	1,263	1,199	+ 5	876	9	378	451,453	12,877,250	12,549,400	+ 3
South Texas	220	141	9	70	54,778	6,160,150	1,376	1,832	− 25	864	74	438	329,844	39,944,450	39,799,900	+ 0.4
Corpus Christi Area	105	74	5	26	42,263	.....	602	740	− 19	401	38	163	245,469	.....	.....	.....
Laredo Area	66	46	2	18	10,163	.....	540	826	− 35	337	30	173	71,259	.....	.....	.....
San Antonio Area	49	21	2	26	2,352	.....	234	266	− 12	126	6	102	13,116	.....	.....	.....
Texas Gulf Coast	128	99	1	28	42,034	5,642,350	745	710	+ 5	581	24	140	244,454	35,189,300	35,623,900	− 1
Texas Panhandle	41	35	5	1	13,917	1,872,100	318	330	− 4	253	48	17	111,896	11,812,250	13,794,000	−14
West Texas	196	165	1	30	151,997	5,411,500	1,234	1,349	− 8	1,042	10	182	920,228	33,856,350	35,300,600	− 4
West Central Texas	31	12	.....	19	1,192	841,800	159	219	− 27	54	8	97	8,157	5,178,300	5,934,800	−11
Wyoming	8	5	2	1	5,198	1,682,550	41	53	− 23	24	10	7	17,293	9,091,000	9,246,150	− 2
Total United States	2,216	1,635	116	465	1,495,855	93,193,450	13,688	15,406	− 11.1	9,916	924	2,848	9,920,349	600,658,850	614,776,650	− 2.3

† June completions cover not the calendar month, but the four weeks, or 28 days, ended June 25.
* Figures for New York and Pennsylvania prior to June revised; completions include water-intake and pressure wells.

The Life of a Core

(Another Pictorial Story)

By DENIS S. SNEIGR

MORE things happen to a core than to an oil company's tax return. Everyone in the paleontological and chemical laboratories—from the office boy on up—does something to the core before the written reports finally get around to various destinations. Just to prove our point, and perhaps learn how the paleontologist and chemist finds this and that out from studying core samples, we'll follow a core around the circuit with our camera and see just what does happen to it.

This way, and please follow the numerals:

1 The boys in the drilling crew have extracted the core barrel from the well, and are now removing the sample procured from the barrel. Sometimes this operation is accompanied by a great deal of pounding and banging. However, if the barrel didn't miss, the core appears eventually. After the core is recovered it is stowed away in sample sacks (small cloth bags) and is hung on convenient nails on the derrick floor. Next, the scouts appear at the well, and take the core into the laboratory.

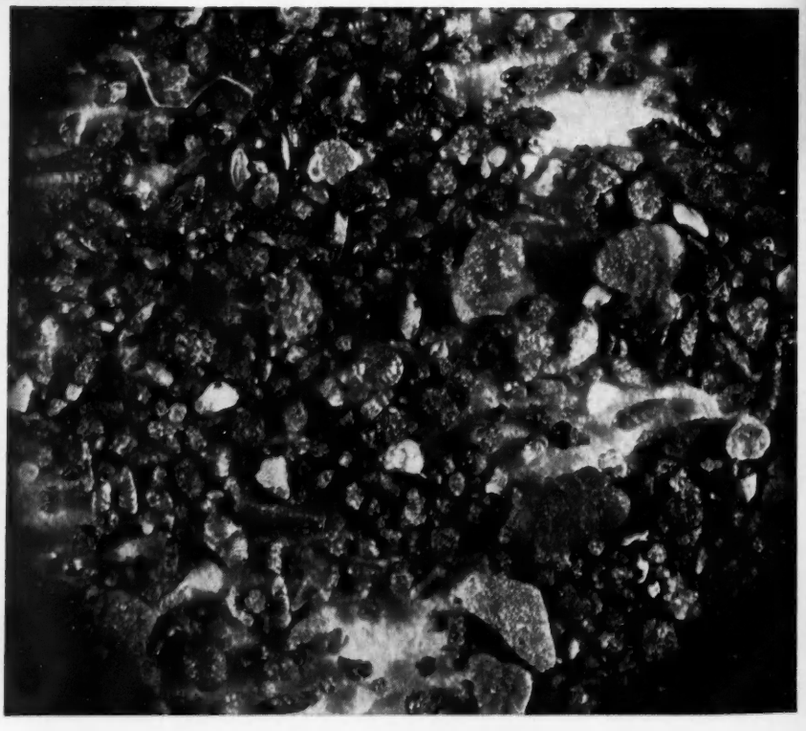
2 The core is now in the paleo lab, where it may lie around in a corner unnoticed anywhere from six seconds to six months—depending on the importance of the well. But for the sake of getting on with the story, we will say it is a core from a "hot" well, and therefore lies around unnoticed only six seconds. In the picture to the left the core is being cleaned of drilling mud. This cleaning process is necessary to minimize contamination because we certainly wouldn't want any forams from way up the hole getting into a core a thousand feet lower. This would throw the paleontologist into a dither and the operator into a panic, as it would indicate the well was running structurally low. Hence, to get the true picture, the core is cleaned. With hard, cemented cores a bit of scrubbing with a wire brush is not amiss. But this core is a shale one, which must be scraped like an ear of corn or the scales from a fish.

[*Continued next page*]

3 After the core has been cleaned, it is broken into small pieces, placed in a pan or beaker and water poured over it. It is permitted to soak for a few minutes or a few hours and in extreme cases for days because some materials will collapse to a soft mushy glop at the mere mention of water, while others will require a day or two of soaking.

4 In the photo above, we see the core being washed. The screens used in washing samples vary in size, from 150 mesh to 200 mesh being the usual sizes. The clays, shales and other soft materials are washed through the screen while the fossils and some sand remains as well as any other hard materials not capable of passing through the screen. These fossils are used by the paleontologist to correlate the particular well with other wells that may have been drilled in the vicinity. From past experience and by computing the natural dip of the beds, the paleontologist knows approximately where a certain marker foram should appear in the well. Thus he can tell whether the well is running structurally low or high.

5 Above is what is left of the sample shown in photo 4. It doesn't look like much, but wait until you see the picture to the immediate right.



6 This (right) is what the wash sample looks like under the microscope. This is a paleontologist's eye view of the finished wash sample. If you will look closely, you will see several larger forams and a great number of smaller ones as well as some sand grains and a piece of lint which got into the picture some way or another. That's the lint in the upper left corner. And this just about cleans up the business in the paleo lab for the time being.

[*Continued on page 22*]

RIGHT IN THE THICK OF IT ...all the time!

A "Caterpillar" Diesel D8 Tractor, with bulldozer, digging slush-pits near Noble, Illinois. It works 24 hours a day on only 3½ gallons of 8 1/5c fuel an hour! Further evidence of the respect for "Caterpillar" dependability and service facilities is shown by the two D13000 Engines being set in place. They'll operate the mud-pump and rotary table.

A "Caterpillar" Diesel D7 Tractor, with Hyster winch, setting a "dog-house" into place near Noble Illinois. This tractor is used for all kinds of heav pulling — including derrick skidding and tool moving Operates 20 hours a day. Uses 2½ gallons of 8 1/ fuel an hour.

Mr. A. C. Smiley, of Olney, Illinois, says: "We ran into about three feet of mud which made tough hauling jobs tougher. And believe me, my 'Caterpillar' Diesel Tractors sure proved their worth. We winched, skidded, and hauled heavy machinery through that mud until you'd swear it couldn't be done." Here is some of that hauling!

There's one kind of oil-field equipment you'll always find right in the middle of the toughest jobs.

And that's "Caterpillar" Diesel equipment... Engines and Tractors!

These machines are built for tough work—built to stick with a slush-pit until it's completed; to stay right on a well and see it finally down!

In other words, you can *trust* this equipment. And your trust is backed-up by complete "Caterpillar" parts and service "just around the corner," so to speak. No other engine and tractor service is so widely available in the oil-fields!

Mr. A. C. Smiley, of Olney, Illinois, pays this tribute to "Caterpillar" Diesel stamina. He says: "Probably the best way to tell you what I think is to say that when I'm ready for another tractor, I'll still buy a 'Caterpillar.'"

You can bet that Mr. Smiley has run into some mighty tough going during a quarter-century of oil-field work. His letter shows he respects "Caterpillar" dependability. *And so will you!*

CATERPILLAR

REG. U.S. PAT. OFF.

TRACTOR CO.

PEORIA, ILL.

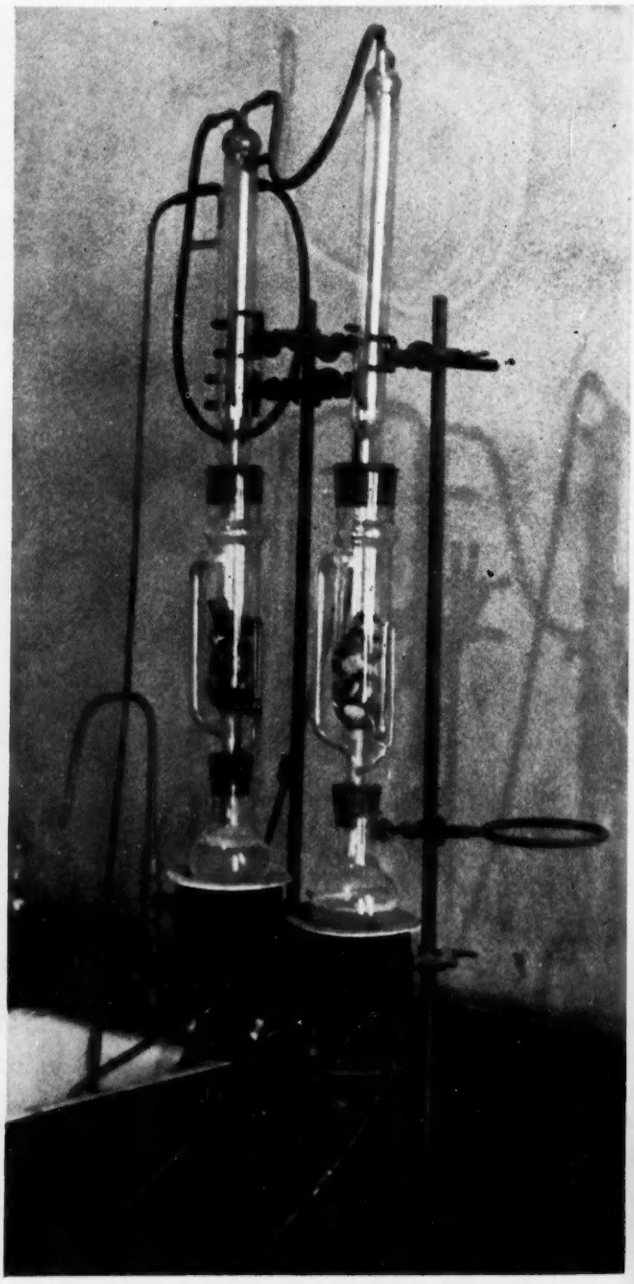
DIESEL ENGINES
TRACK-TYPE TRACTORS
ROAD MACHINERY

7 Now we'll go to the chemical lab where we will see the porosity and permeability tests. The photo above shows a piece of core being cut to size. Out of each core a vertical and horizontal sample usually are taken.

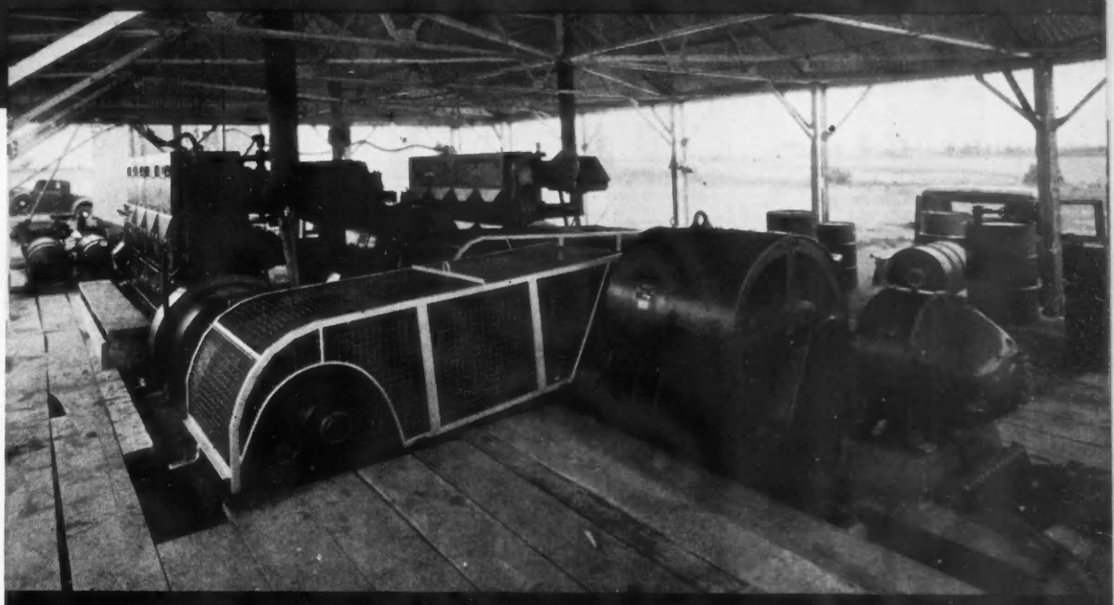
9 Next the samples are dried in an oven, as shown above, at about 105° Centigrade. This step is to remove any extraction fluid or water which may remain.

[*Continued on page 24*]

8 These little cores taken from the larger core are next placed in the extraction apparatus shown below. This procedure is to remove water or oil—if any—which the samples might contain before proceeding with the porosity and permeability tests. If all the oil and water were not removed from the sample before proceeding with the test, the results would not be true. Hence the necessity of extracting all the liquids from the core. Here the cores are in the extractor, in which any of several solvents may be used, among them being petrolic ether, ether, carbon tetrachloride and light gasoline. The solvents may be seen in the flasks below the samples. When this piece of apparatus is in operation, it looks like those gurgle and goo chemical sets you see in the pseudo-scientific movies—a lot of boiling going on.



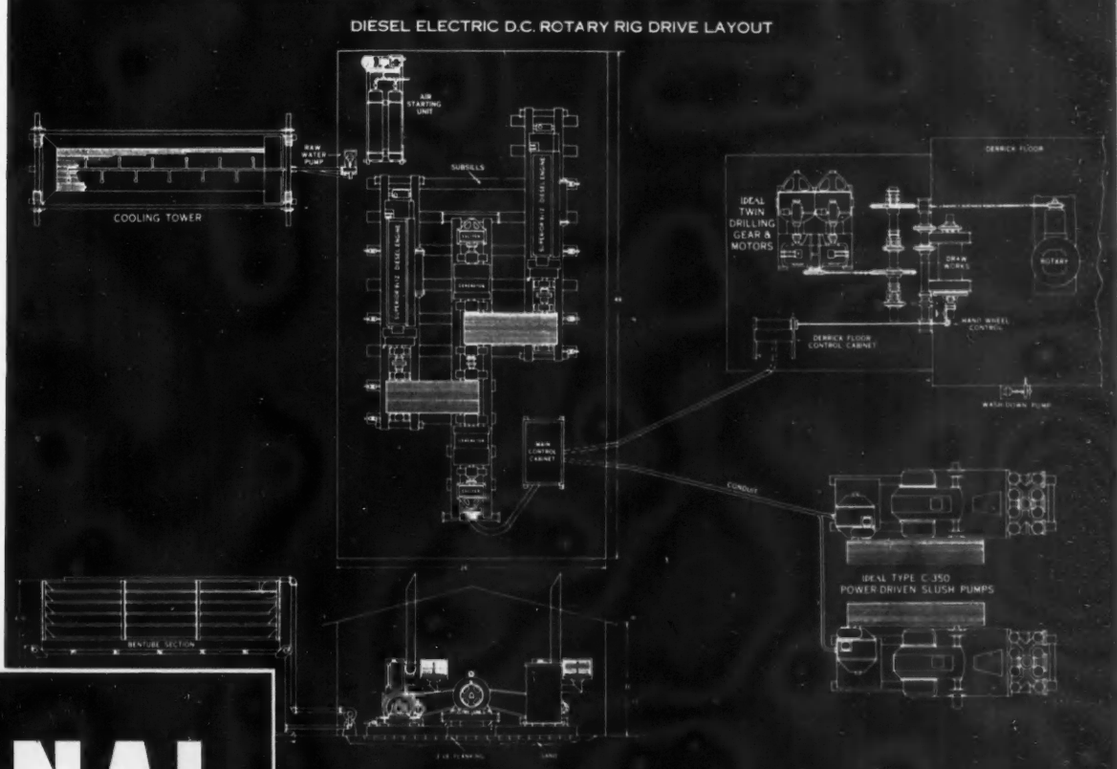
NATIONAL
DIESEL ELECTRIC ROTARY RIGS
MAKING DEEP WELL HISTORY



● National Diesel Electric Rigs are demonstrating their speed, dependability and economy in all principal deep drilling areas. Power equipment is available in various sizes for different depth requirements. Typical ratings are as follows:

	HEAVY DUTY RIG	MEDIUM DUTY RIG
PRIME MOVERS	2—350 HP, 600 RPM 8-cylinder Superior Vertical Diesel Engines	2—260 HP, 600 RPM 6-cylinder Superior Vertical Diesel Engines
MAIN GENERATORS	1—200 KW, 200 Volt, 1200 RPM 1—250 KW, 200 Volt, 1200 RPM	1—125 KW, 200 Volt, 1200 RPM 1—175 KW, 200 Volt, 1200 RPM
DRILLING MOTORS	2—200 HP, 200 Volt, 900 RPM Twin, or alternatively 1—200/400 HP, 200/400 Volt, 450/900 RPM Single	2—150 HP, 200 Volt, 900 RPM Twin or alternatively 1—150/300 HP, 200/400 Volt, 450/900 RPM Single
SLUSH PUMP MOTORS	1 or 2—300 HP, 200 Volt, 900 RPM	1 or 2—200 HP, 200 Volt, 900 RPM

DIESEL ELECTRIC D.C. ROTARY RIG DRIVE LAYOUT

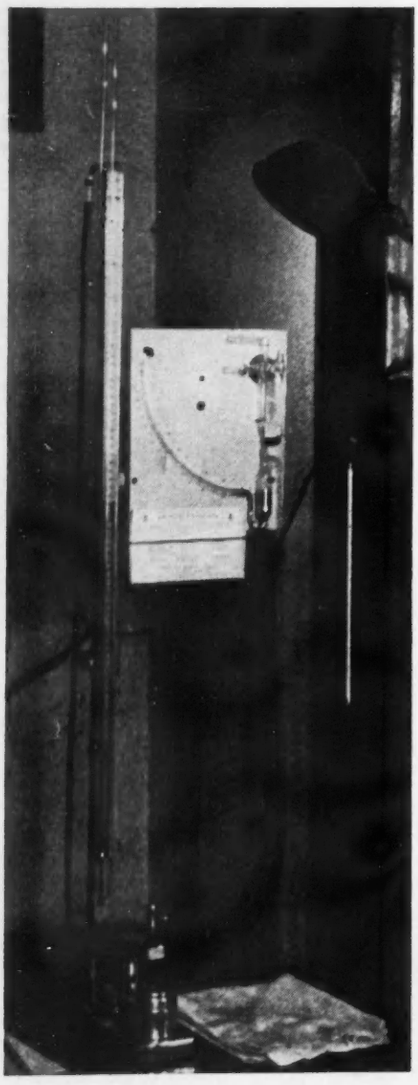


NATIONAL

THE NATIONAL SUPPLY COMPANY

EXECUTIVE OFFICES: PITTSBURGH, PA.
DIVISION OFFICES: FT. WORTH, TEXAS; TULSA, OKLA.; TORRANCE, CALIF.
GENERAL SALES OFFICE: TOLEDO, OHIO

● A new depth record was set for Oklahoma when Gulf Oil Company No. 1 Thomas in southeastern Grady County was recently carried to a depth of 11,415 feet. This well was drilled by the Parker Drilling Company with a National Heavy Duty Diesel Electric Direct Current Rotary Rig Drive.



10 Here we have the permeability apparatus (see above). The little round case below the screw clamp in the lower foreground is the core holder, of which there are two types—the round one for round cores and square ones for square cores. The sample is first placed in the holder and the screw clamp tightened. Then air pressure is applied to the bottom of the core. The tall glass column is a manometer, which measures this air pressure. At the upper right of the photograph is a flow meter, which gives the number of cubic centimeters per second of air that passes through the core.

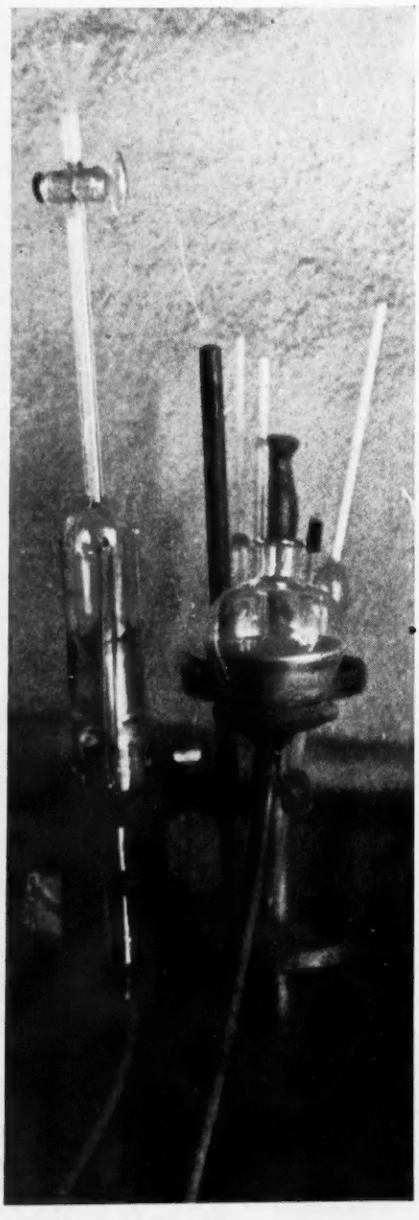
Then four factors are used to compute the permeability: the air pressure on the core, the air which passes through the core, the area of the core surface, and the length of the core. Permeability, you see, is the rate at which a fluid or gas will flow through the sand, and is important in producing operations.

11-12 The porosimeter is shown at left below, which, as you may have guessed, is a gadget for measuring the porosity of a core sample, which is the percentage of pore space in the particular sample. In other words, how much space between the sand grains is free to be occupied by a fluid or a gas. We'll be referring to photograph No. 12, so you may as well take a look at it now (to your right below, please), then we'll get on with this porosity business.

In Photo 11, the core holder may be seen at the left and the level bottle at the right. The core is placed in the holder and the level bottle is raised until the mercury rises up into the stem of the core holder. This stem, above the core holder, is calibrated in cubic centimeters. After the mercury is raised above the stop cock, the cock is closed which leaves a mercury seal above it. The level bottle is then lowered until the mercury level is down in the lower part of the core holder. Photo 12 (remember it is below at the right side of the page) shows the level bottle being raised.

The next step is to again raise the level bottle until the mercury in the bottle is level with the mercury in the stem above the core holder. The first reading on the calibrated stem is taken now. The level bottle is then raised higher, the stop cock opened and any displaced air released. The stop cock again is closed, leaving a mercury seal and the entire procedure is repeated until no more air is displaced and the reading on stem is zero. The several readings are added to give the total amount of air displaced in the sample. The volume of the sample is measured in a pyonometer. The amount of air displaced is then divided by the volume, which gives you the porosity of the sample. Yes—it does!

[*Continued on page 26*]



Flexible... because it is *Cushioned on Air*

The

REED

AIR BALANCED PUMPING UNIT

will...

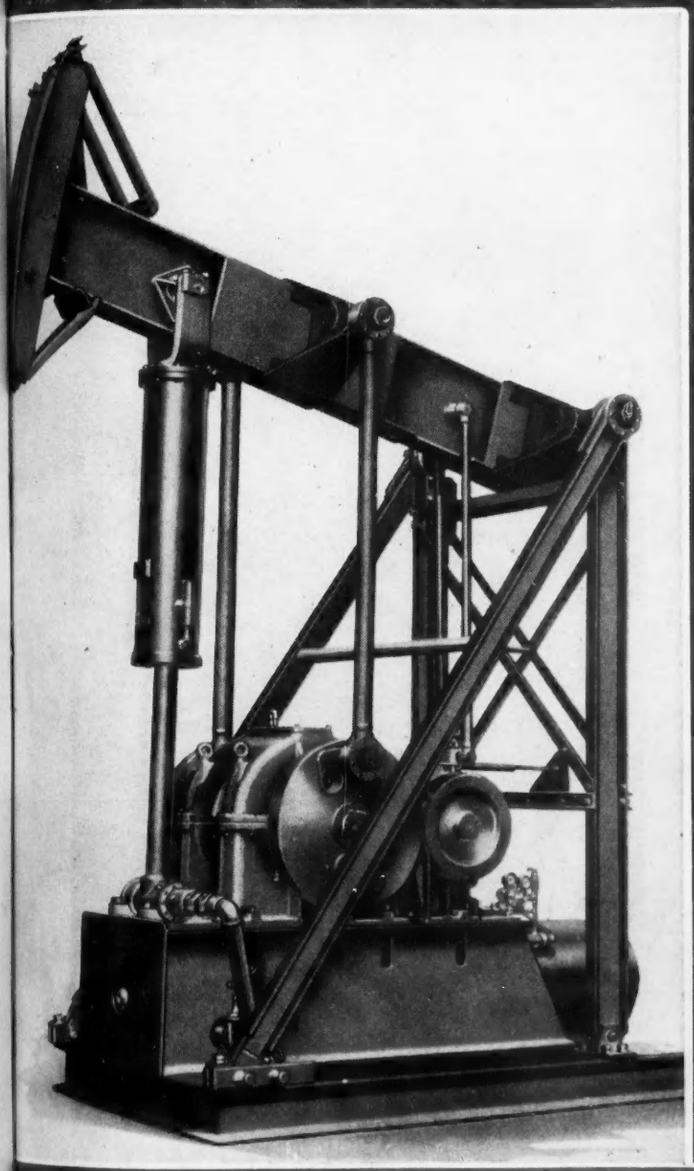
REDUCE ROD FAILURES

•

DECREASE PRODUCTION COSTS

•

ELIMINATE COSTLY FOUNDATIONS



Ask for Bulletin No. 378

REED ROLLER BIT COMPANY

P. O. DRAWER 2119, HOUSTON, TEXAS

13 You may have thought we were finished, but there remains one more operation—and this takes us back to the paleo lab. Immediately above, you see a piece of core being ground smooth on a motor-driven wheel. After one side of the sample (and the operator's fingers) are leveled off, the smooth side of the sample will be finished on the small hand stone shown in the photograph to the right.

When this side is completely smooth, it will be mounted on a glass slide with Canada Balsam. Then the other side of the sample is ground down in the same manner. However, this time the grinding and polishing are carried out until the sample is so thin light can pass through it easily. A cover glass is cemented in place, and we have a finished thin section. These thin sections are made of practically any hard material. The paleo uses them to study forams imbedded in hard material. The mineralogist uses thin sections also. With clays, shales, loose sands and other materials which will break down readily in water, the forams may be washed out of the sample as explained in Photo 4. However, in hard materials that will not dissolve in water, the only method of getting to the forams to examine them is by way of the thin section. And while the making of thin sections requires much more time than the washing of samples, it is sometimes the only method which can be applied successfully to a particular sample.

14 Here are two finished thin sections as seen through the microscope. To the left may be seen the outline of several fossils, while to the right is a thin section of a piece of cap rock showing the crystal structure.

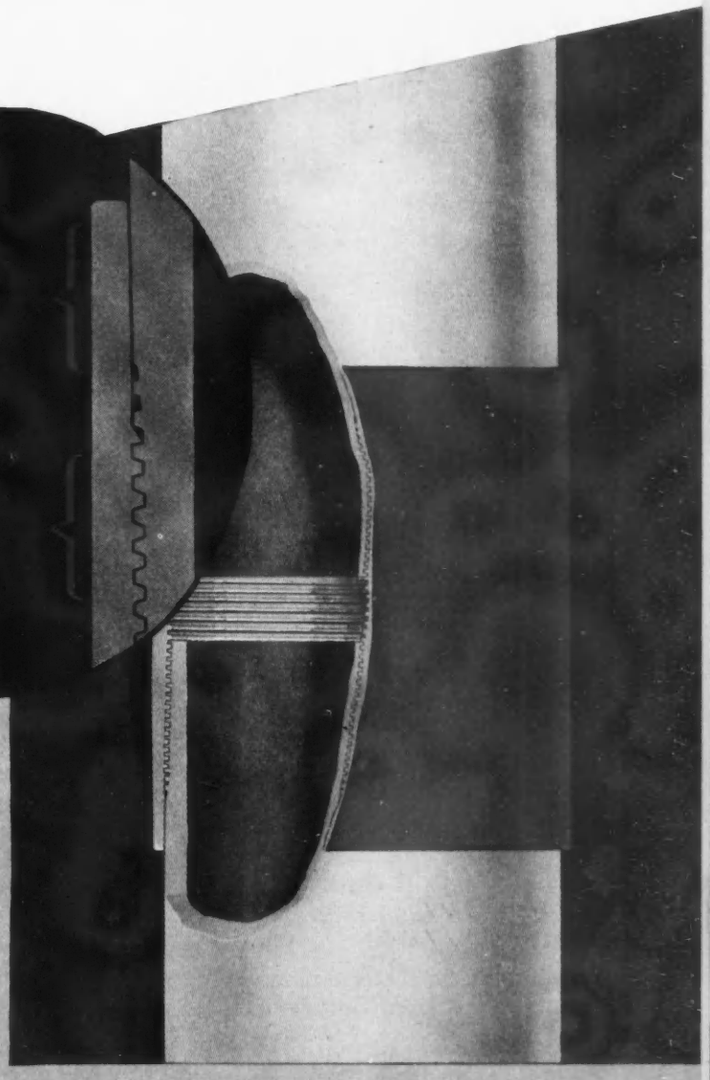
We have seen how the scientist aids in the search for the elusive black gold. From the paleo lab and the paleontologist comes information as to where the drilling well is in relation to geological formations, which indicate its chances of producing. After a sand is cored in a well the chemical lab tell us what to expect in the way of production from that particular sand. The studying of cores is a routine process to the industry today — but so important.

The ONLY CASING with a JOINT that DOUBLE SEALS!

EXCLUSIVE:

1. The only Casing Joint with an effective shoulder-seal. Note the machined *land* area on pipe and mating recess in coupling, tapered in exact alignment with the threads.

2. The only Casing Joint (of the fast-running, six-pitch, modified-square-thread type) that follows familiar manufacturing methods—and that fits in perfectly with *customary* field practice.



You can stab *this* Casing without fear of injuring the threads! Sturdy design enables the threads to withstand blows and abuse . . . make an effective thread seal every time! • You get an *extra* seal, too. This is provided by the machined *land* area beyond the threads on the pipe, with mating recess in the coupling. • PITTSBURGH SPECIAL CASING also gives you: (1) extra clearance—with the thin-wall, alloy-steel coupling; (2) fast make-up; (3) fool-proof stabbing; (4) greater joint strength. • Ask for details.

PITTSBURGH STEEL COMPANY · PITTSBURGH, PA.

NEW YORK CLEVELAND DETROIT CHICAGO
MEMPHIS TULSA HOUSTON LOS ANGELES

Export Distributor: Lucey Export Corporation, New York, N. Y., U. S. A.

Pittsburgh Special CASING

....with the FAST-RUNNING DOUBLE-SEAL JOINT....

PATENT No. 1,942,518

THERE IS NOTHING EQUAL TO SEAMLESS

Methods for Determining the Hydrogen Sulfide Content of Natural Gas

By FRANK PATTEN,
Chemical Engineer, Railroad Commission, Texas

THE determination of the hydrogen sulfide content of natural gas is based on two properties of hydrogen sulfide. They are the ability of hydrogen sulfide to react metathetically with salts or hydroxides of metallic ions to form metallic sulfides; or the ability of hydrogen sulfide to be oxidized to free sulphur with the accompanying reduction of another compound. These reactions are numerous, and have given rise to a great number of methods for determining hydrogen sulfide. They probably may best be classified under the following headings:

(a) Colorimetric Determinations
(b) Absorption and Titration Methods

These methods will be taken up under the latter classification:

Colorimetric Determination of Hydrogen Sulfide

Hydrogen sulfide will react with a number of metallic salts to form insoluble sulfides which have characteristic colors and will reduce certain organic compounds to produce colored dyes. These properties of hydrogen sulfide are the basis for a number of colorimetric methods for determining this compound in gases. These colorimetric methods are applicable where rapid determinations are needed, and where the accuracy of the determination of concentration of hydrogen sulfide need not be great. The simplest method for the detection of hydrogen sulfide consists in wetting a piece of filter paper with a salt or organic compound, and holding it in a stream of the gas to be tested. Lead acetate is the most commonly used compound in this test, the process being frequently referred to as the "blotter test." When employed in this manner, the test serves only to indicate the presence of hydrogen sulfide, and does not give a very quantitative indication as to the concentration of hydrogen sulfide in the gas.

This simple strip test has been improved to such an extent that it will give semi-quantitative determinations of the concentration of hydrogen sulfide. This improvement consists chiefly in controlling the amount of gas which is allowed to come in contact with the wetted strip of filter paper. In addition to control of the amount of gas used in the test, reagents having varying sensitivity may be used; thus, in some tests which were made on the sour natural gas produced from the Panhandle field of Texas, where the strip of paper was placed in a test tube and natural gas was allowed to flow through the test tube for three to five minutes at a rate of five cubic feet per hour, five percent solutions of various reagents gave the results shown in Table 1, in a time relationship.

Trusdale[1] has worked with a number of reagents to determine their sensitivity in the detection of traces of hydrogen sulfide. His results indicate that an alkaline solution of lead acetate is the most sensitive and most reliable of reagents commonly employed.

Littlefield, Yant and Berger[2] have developed a method for using colorimetric tests for quantitative determinations. They impregnated activated alumina with silver cyanide, dried it and placed it in a glass tube of suitable size. A measured volume of natural gas was forced through this tube by the use of a piston pump or rubber bulb, and the hydrogen sulfide in the gas reacted with the silver cyanide to form silver sulphide which is black in color. The concentra-

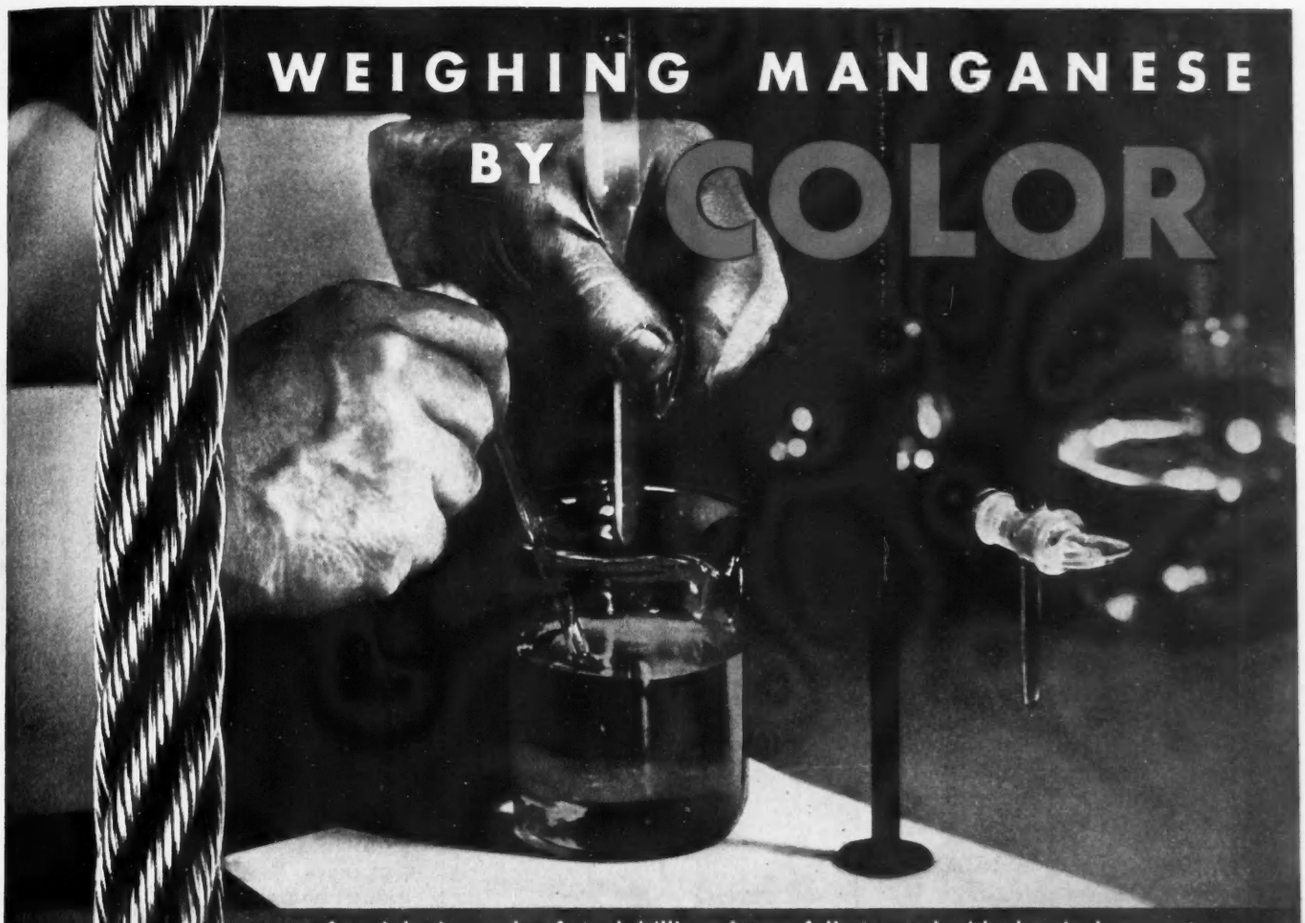
TABLE 1

Spot Tests for the Determination of Hydrogen Sulfide Gas

Very Faint	Faint	Distinct	H_2S(gr./100 Cu. Ft.)
$Pb(Ac)_2$ or Ag_2SO_4			.05
	$Pb(Ac)_2$ or Ag_2SO_4		.10
		$Pb(Ac)_2$ or Ag_2SO_4	.18
$CuSO_4$			.33
	$CuSO_4$		.59
		$CuSO_4$	1.05
$CdCl_2$	$SbCl_3$		1.86
	$CdCl_2$		3.36
$HgCl_2$			6.03
		$HgCl_2$	10.80

Presented before Southwestern Gas Measurement Short Course, Norman, Oklahoma.

WEIGHING MANGANESE BY COLOR



A weighed sample of steel drillings is carefully treated with chemical reagents until a pink colored solution is developed, wherein the intensity of the pink color is proportionate to the amount of manganese present in the steel. A standard solution of sodium arsenite is then run into the solution, drop by drop, from a measuring tube until the pink color disappears. The amount of sodium arsenite required is a direct indication of the amount of manganese in the steel sample.

BUILDING LIFE INTO WICKWIRE ROPE "BEYOND SPECIFICATIONS" . . . . .

It still is the privilege of the progressive manufacturer to build rope life into his product beyond official specifications.

In making steel for the highest quality wire rope, manganese is added in small quantities to make the rope tough and to give it high fatigue resistance. Extreme care is exercised in proportioning the manganese to the steel. Excessive manganese would make the steel hard and brittle with resultant drop in fatigue life. That is why we so accurately measure the manganese content of every heat of rope steel. Years of laboratory research and endless field studies have disclosed the proper manganese balance that gives Wickwire Rope that longer life.

WICKWIRE ROPE

WICKWIRE SPENCER STEEL COMPANY

General Offices: 41 East 42nd Street, New York City; Sales Offices and Warehouses: Worcester, New York, Chicago, Buffalo, San Francisco, Los Angeles; Export Sales Dept.: New York City. WICKWIRE SPENCER SALES CORPORATION, New York, Chattanooga, Tulsa, Abilene, Texas, Portland, Seattle.

tion of the hydrogen sulfide in a given volume of gas was determined by the number of granules of activated alumina which were darkened by the gas. This number itself was determined by the distance up the glass tube that the granules were darkened. This method of testing gives a fairly accurate determination of the concentration of hydrogen sulfide in natural gas.

A detector using this principle has recently been put on the market. The detector tubes which are furnished with this apparatus are stable and may be kept for an indefinite length of time.

Absorption and Titration Methods

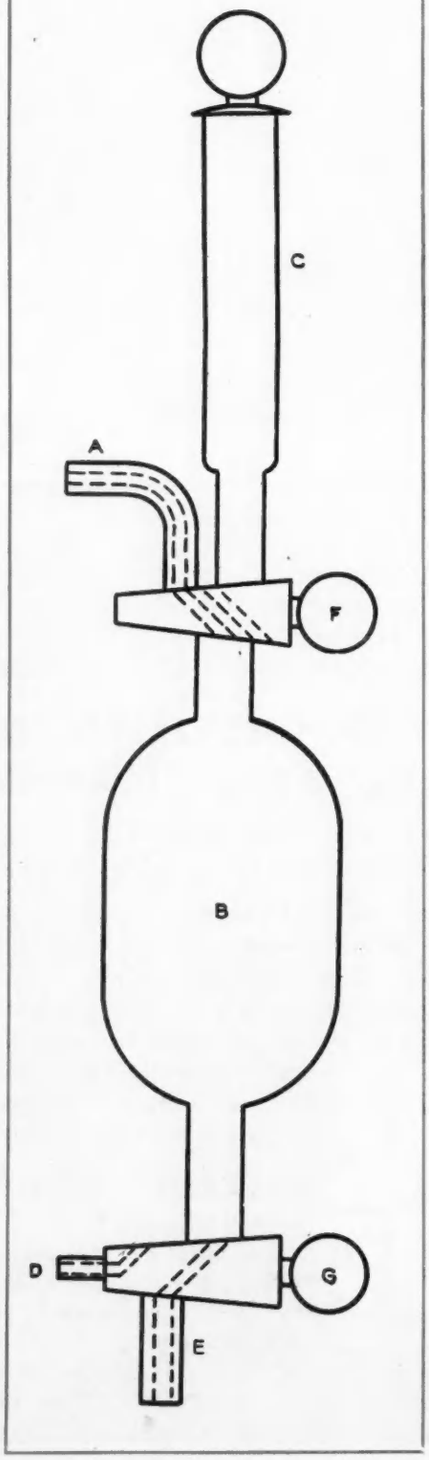
Where hydrogen sulfide is present in relatively high concentration (more than twelve grains per hundred cubic feet) the commonly used method is that introduced by Tutwiler.[3] Its action depends on the oxidation of hydrogen sulfide by iodine. The apparatus used is shown in Figure 1. The procedure involved is as follows:

Open the stopcock F to A and allow the gas to pass through the bruette B and out at E for a few minutes until the air in the burette has been entirely displaced by the gas to be tested. Close F and turn G so that E communicates with D. Allow to stand for a few minutes until the temperature of the gas has become equal to room temperature. Connect the leveling bulb to E and allow the starch solution contained in the leveling bulb to rise just into the stopcock G. Now turn G so that E communicates with B and bring the level of the starch solution in the leveling bulb slowly up to the one hundred cubic centimeters mark. Close G and open B to A momentarily. Close F, lower the leveling bulb, and open B to E until the starch solution has all run back out of the burette. Close G and remove the leveling bulb. Fill the graduate C with standard iodine solution. Introduce the iodine solution to the burette slowly, shaking after the addition to each few drops. Continue until the first permanent blue color appears.

The strength of the iodine solution used will depend upon the approximate concentration of hydrogen sulfide in the gas. When a solution containing .0017076 grams of iodine per cubic centimeter is employed each cubic centimeter of the solution required will be equivalent to one hundred grams of hydrogen sulfide in the gas.

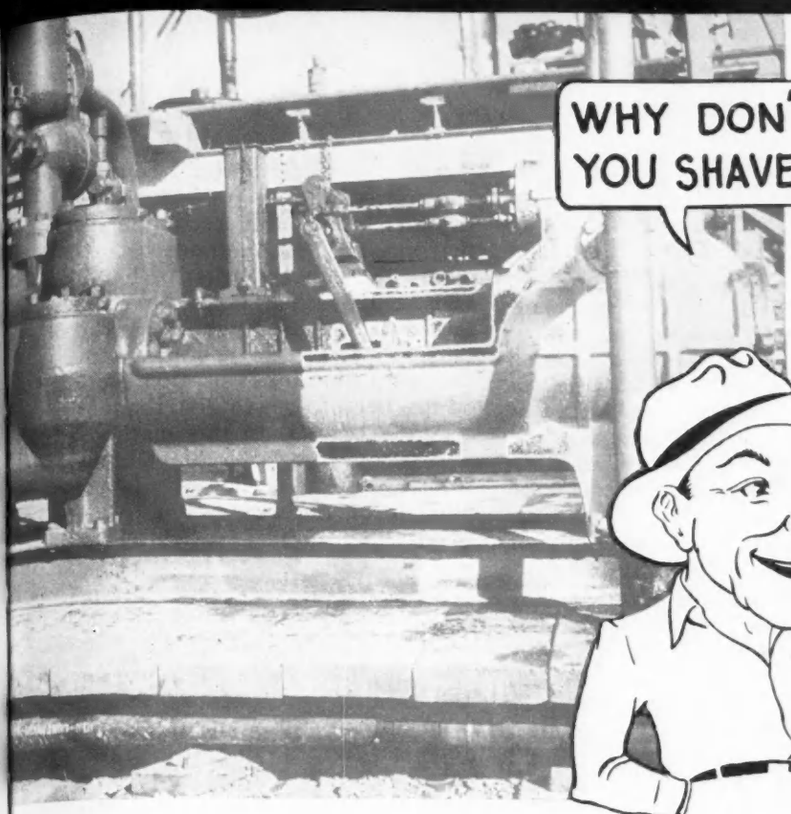
More accurate methods for the determination of hydrogen sulfide necessitate the use of absorbing solutions placed in suitable absorbers through which gas is passed and the hydrogen sulfide removed. Several such methods have been introduced, and all of them give satisfactory results when employed on the proper type of natural gas.

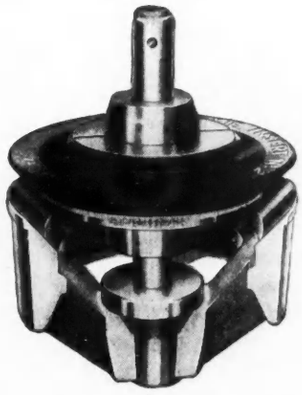
FIGURE 1
Tutwiler Apparatus



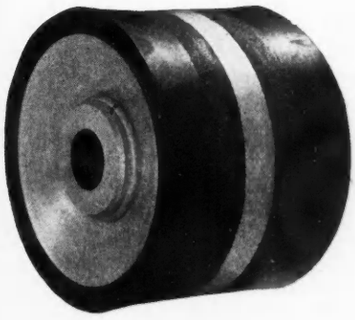
Devine, Wihelm and Schmidt[4] absorbed the gas in a silver salt solution (either silver nitrate or silver sulfate). The absorbing solution was three hundredths normal. The natural gas was passed through the absorber and then to a test meter. After the black precipitate had formed the apparatus was disconnected, and the solution filtered from the precipitate and quantitatively collected in an Erlenmeyer flask. Twenty cubic centimeters of three hundredths normal sodium chloride was added, and the silver nitrate which had been consumed by the hydrogen sulfide was determined by titrating the residual chloride with three hundredths normal silver salt solution. Five or six drops of saturated sodium chromate were used as an indicator. When all of the excess sodium chloride had been consumed by the silver salt the latter reacted with the sodium chromate to form a red precipitate of silver chromate. When the precipitate began to be formed the end point had been reached. This method for the determination of hydrogen sulfide had the deficiency that the silver salt solution had to be quantitatively transferred to the Erlenmeyer flask, and that the silver chromate precipitate was difficult to distinguish in the presence of the silver chloride precipitate and the yellow sodium chromate solution. For these reasons, it is recommended only when trained chemists are available for hydrogen tests.

Sodium hydroxide also has been used rather widely as an absorbing reagent. Ten percent sodium hydroxide solution is recommended. Twenty to fifty cubic centimeters of this solution are placed in the absorber and enough hydrogen sulfide is passed through it to be equivalent to approximately ten cubic centimeters of three hundredths normal standard solution. The volume of gas which is passed through the absorbing solution is again measured by means of a test meter. When the required volume of gas has been passed through the solution, the apparatus is disconnected and the solution is quantitatively transferred to a two hundred fifty cubic centimeter Erlenmeyer flask. Care should be taken in transferring this solution to in-





MISSION SILVER TOP VALVE



MISSION PISTON

MISSION VALVES and PISTONS

Outlast them all

Because:

with MISSION VALVES it's

"Pull the Bushing and Save the Seat"

with MISSION PISTONS it's

"Change the Rubbers and Save the Piston"

Sold Through Supply Stores Everywhere

MISSION POLICY

"IF A PRODUCT DESIGNED BY MISSION IS NOT . . . PROVEN *Superior* MISSION WILL NOT PRODUCE IT"

MISSION MANUFACTURING CO.

HUMBLE ROAD, HOUSTON, TEXAS

EXPORT OFFICE: 30 ROCKEFELLER PLAZA, NEW YORK

• SLIPS • VALVES • PISTONS • PISTON RODS • SWABS

sure that the absorbers are well washed with distilled water and that these washings are transferred to the Erlenmeyer flask. Twenty-five cubic centimeters of standard three-hundredths normal iodine solution is added.

An excess of hydrochloric acid (twenty-five to one hundred cubic centimeters of 10 percent hydrochloric acid, depending upon the amount of sodium hydroxide employed) is added to the solution to free the hydrogen sulfide. The hydrogen sulfide which has been absorbed in the sodium hydroxide is released and reacts with a portion of the iodine solution. The residual iodine is determined by titration with standard three-hundredths normal sodium thiosulfate. This is added drop by drop with constant stirring until the reddish color of the iodine has lightened to a very light yellow. At this point a few cubic centimeters of starch solution is added and the color changes to a deep blue or black. The thiosulfate solution is now added, a drop at a time, until the deep blue color entirely disappears.

This method of determination has the same disadvantage that the silver nitrate method has in that a quantitative transfer of liquids must be carried out; but it has the advantages over the silver salt absorption method in that the end point is very sharp, and that no filtration is required. A sodium carbonate solution may be used in the place of the sodium hydroxide solution with equal success.

Very recently Lilly[5] and Chesnutt have introduced a method which makes use of the reduction of ceric sulfate to cerous sulfate by hydrogen sulfide. Ten cubic centimeters of one tenth normal cubic centimeters diluted to approximately twenty cubic centimeters of distilled water is recommended as the absorbing solution. Gas is passed through the absorbing solution in the same manner as that which has been described in the two preceding methods. When the desired amount of gas (a volume containing hydrogen sulfide equivalent to approximately one-half of the absorbing solution) has been passed through the solutions; the latter is quantitatively transferred to an Erlenmeyer flask. This transfer again requires that the absorber be thoroughly washed with distilled water, and that the washings be added to the solution in the flask. Two drops of orthophenantroline ferrous complex indicator is added and the residual ceric sulfate is titrated with one-tenth normal ferrous sulfate. The end point is indicated by the sudden appearance of an intense red color.

This method has the same advantages that the alkaline absorption method has, and has the added advantage that the standard solutions are not volatile, as is true of the standard iodine solution, and that hydrogen sulfide is not released from the solution prior to titration. Hence, there is less likelihood of error due to the escape of gas or vapor in the titration.

Of the methods which have thus far been discussed, the colorimetric tests, the Tutwiler method, the silver nitrate method, and the alkaline absorption method all give erroneously high results when mercaptans are present. Lilly and Chesnutt report that the ceric sulfate solution does not react with the heavier mercaptans, but it has been found in tests which have been made on natural gas produced in the Texas Panhandle that this method is not dependable when the lighter gas mercaptans are present. Hence, when natural gas is encountered which contains an appreciable quantity of mercaptans, it is not recommended that any of these methods be used where the concentration of hydrogen sulfide alone is to be determined in the presence of mercaptans. Under these conditions the cadmium sulfate absorption method has been found to give the most accurate results. In this method a five percent solution of cadmium sulfate, which is neutral, is employed for the absorption. About twenty-five cubic centimeters of this solution is ordinarily used.

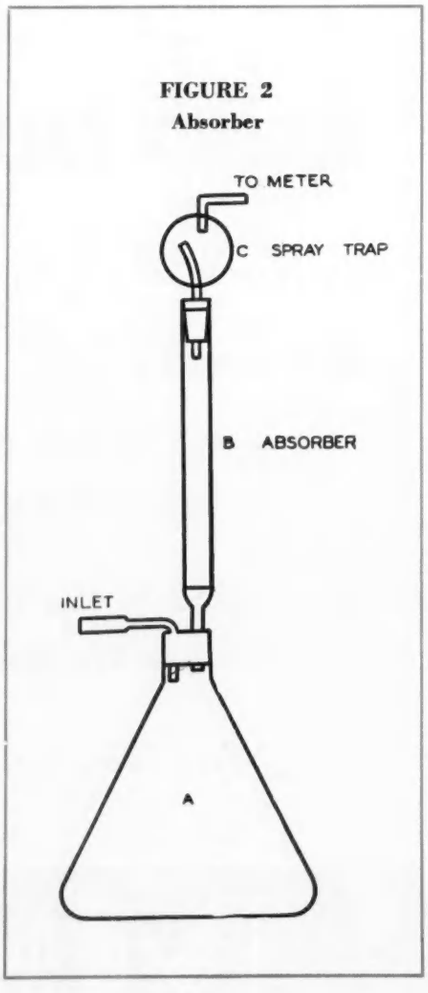


FIGURE 2
Absorber

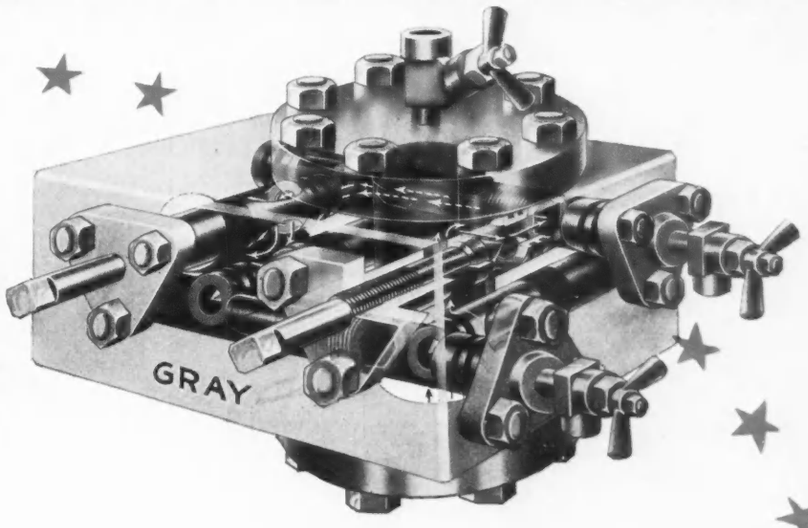
Natural gas is passed through this solution until an appreciable yellow precipitate of cadmium sulfide has been formed. The cadmium sulfide precipitate is filtered from the cadmium sulfate solution and transferred to the titrating vessel. In some cases it is more convenient to carry out the titration in the absorbing vessel, and under these circumstances the cadmium sulfate solution is not separated from the cadmium sulfide precipitate. The precipitate, or solution and precipitate, is diluted to approximately seventy-five cubic centimeters with distilled water; twenty cubic centimeters of three-hundredths normal iodine solution is added, followed by fifteen cubic centimeters of concentrated hydrochloric acid. The excess iodine is titrated with sodium thiosulfate in the manner that has been described for the alkaline absorption method.

A number of types of absorbers may be used with all these methods. The simplest of these consists of a one inch by eight inch test tube fitted with a two-hole rubber stopper. Through one hole of the rubber stopper a glass tube is placed which extends almost to the bottom of the test tube. The gas enters through this tube and leaves through a short piece of glass tubing which is inserted in the other hold of the two-hole rubber stopper and extends just below the stopper. This type of absorber is always readily available, but limits the rate at which the gas can be passed through the absorbing solution. A maximum of one and one-half to two cubic feet of gas per hour can be used with this type of absorber. Various improvements have been made on the absorber which has just been described.

The two types of apparatus which are most commonly used both employ a fritted or centered glass disc or plate to break up the

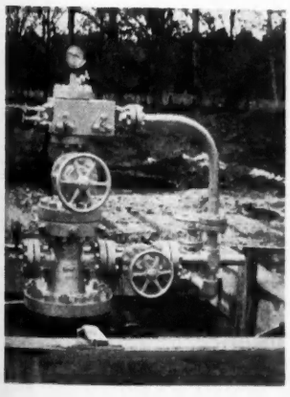
CONCENTRATED CONTROL

the GRAY COMPOSITE MANIFOLD



A CHRISTMAS TREE AND FLOW LINE MANIFOLD ALL IN ONE

- Concentration of parts effects true economy without sacrificing quality.
- Has all advantages of two wing manifold.
- All working parts easily repaired or replaced.
- In no way effects other operations on the well.
- A Unit in GRAY SYSTEMS OF WELL CONTROL



OVER 300
COMPOSITE MANIFOLDS
NOW IN USE IN **19** FIELDS
BY **21** COMPANIES

GRAY
TOOL COMPANY
HOUSTON – TEXAS

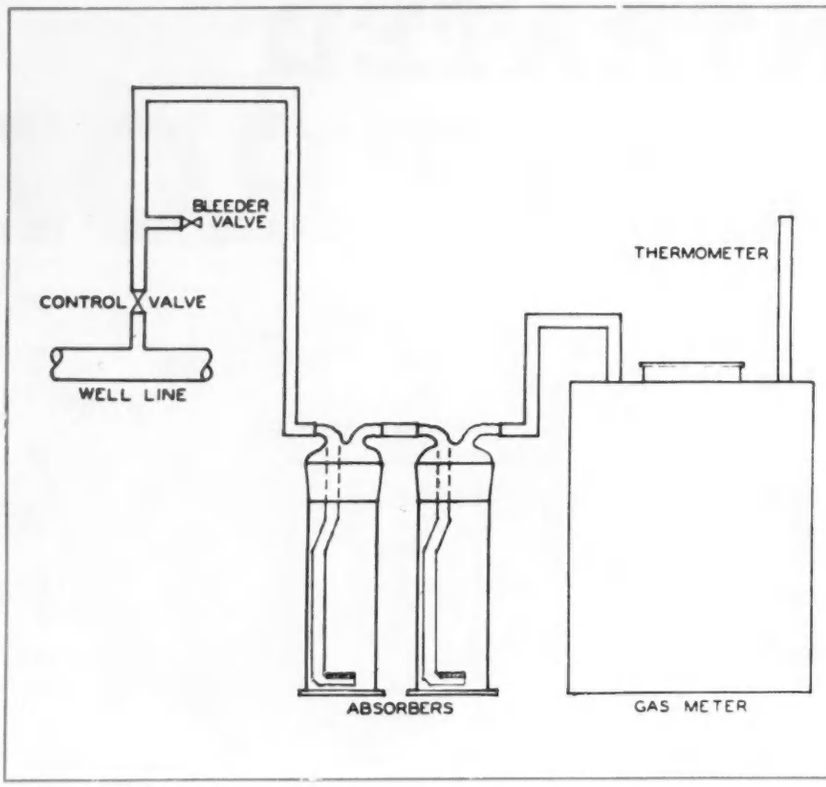


FIGURE 3
Absorption System

FIGURE 4
Titrating Vessel

gas stream into small bubbles. These absorbers are shown in Figures 2 and 3. With the first of these two types (shown in Figure 2) it is easily possible to transfer solutions to the Erlenmeyer flask by turning the two-way stopcock, shown in the figure, so that the solution will pass to the flask. Where, as in the cadmium sulfate method, it is necessary to titrate a metallic sulfide precipitate. The absorber is placed in a titrating vessel. A titrating vessel for this purpose has been developed by the Phillips Petroleum Company and is shown in Figure 4. With the second type of fritted glass absorber (shown in Figure 3) the titration can be carried out in the absorbing vessel. However, where it is desirable to remove precipitates before the solution can be titrated, as is true of the silver salt method, it is necessary to use a filter paper for the separation. Hence, this absorber is not recommended when this latter method is employed.

It is important that the gas procured be a representative sample. If gas is allowed to remain in the well for a period of time, it may lose a part of its hydrogen sulfide because of the action of the gas upon the tubing. It is also true that if there is no flow of the gas from the well, the hydrogen sulfide and mercaptans present will tend to settle to the bottom of the hole because of their higher specific gravities. For this reason, wells which have been shut in for some time should be blown for at least 30 minutes before testing, to make sure that a true sample is run into the absorbers. Whenever possible, samples should be taken from the well-head, and, in any case, at a point as close to the source of the gas as is possible. If there are no one quarter-inch connections on the well and proper connections are not available to swage the christmas tree down to one-quarter inch, it is advisable to obtain the sample from the meter setting, after purging the manifold.

Bibliography

[1] E. C. Truesdale, "Sensitivity of Various Tests for Hydrogen Sulfide," Ind. Eng. Chem. Anal. Ed. Vol 2 (1930).

[2] J. B. Littlefield, W. P. Yant, and L. B. Berger, "A Detector for Quantitative Estimation of Low Concentrations of Hydrogen Sulfide," U. S. Bureau of Mines, R. I. 3276 (1935).

[3] C. C. Tutwiler, "The Quantitative Estimation of Hydrogen Sulfide in Illuminating Gas," Jour. Am. Chem. Soc., Vol 23, p. 173 (1901).

[4] J. M. Devine, C. J. Wilhelm, and Ludwig Schmidt, "Corrosion of Steel by Gases Containing Traces of Hydrogen Sulfide," U. S. Bureau of Mines, Technical Paper 560.

[5] R. M. Lilly and N. P. Chesnutt, "Determining Hydrogen Sulfide Content of Gas in the Field," Oil and Gas Journal, Vol. 36, No. 14, p. 52 (1937).

Economic Factors Control Pennsylvania-New York District Activity

History of the area shows that secondary recovery methods are capable of yielding many barrels of oil, but that their successful operation depends on good prices

By FRANK B. TAYLOR, Staff Writer

WITHIN recent years the application of secondary recovery methods have superseded normal exploration in Pennsylvania and New York sectors until at present about one half all production is secondary. In the Pennsylvania grade region, extending into New York in the vicinity of Bolivar and Wellsville, an estimated 65 percent of the production is secondary. In the Bradford area a substantial proportion of the drilling now underway is for repressuring, this being estimated at about 45 percent, or more, depending upon the particular section being developed. In the southwest region, the normal gravity decreases to make secondary repressuring less profitable. Here, wildcatting is more general.

Considered as a whole, the Pennsylvania-New York district is the only major area in the world fundamentally devoted to secondary recovery programs. This changeover followed the gradual depletion of the steadied production along the Allegheny and across the state line. Operators, knowing that only a comparatively small proportion of the stored crude had been obtained by usual pumping, gave concerted attention to means of increasing recovery. Vacuum, air repressuring, and other means were tried with spasmodic results. Controlled flooding became a practical method only after pattern layout replaced random drilling and water was conditioned. Permeability, or the property of a sand body to transmit gas or fluid in a viscosity-pressure relationship, became the chief governing factor in the usual choice between gas repressuring and water flooding.

With increased success and greater knowledge of the process of secondary recovery, the entire sector was re-prospected with the idea of applying the new principles. Also, as experience added to the knowledge of the work to decrease costs and to increase recovery, areas that at first were considered non-commercial were again in the prospective list. When the highly favorable areas were fairly well taken, and operators were looking toward outlying sections the 1930 break occurred, and it was necessary for the industry in general to retrench. This particularly effected secondary recovery projects for it was found that neither gas nor water, especially the latter, could be turned off a repressuring job without damage to the property and loss of ultimate yield. After experiment it was determined that by continuing water input to sustain built up reservoir pressure in a flood project, and by pumping off the passed water at

the producing well, the detrimental effect of an enforced shutin was minimized.

With the more recently indicated return to industrial stability, operations in the district resumed their interrupted pace. Acreage was obtained for development in all sectors. Original projects were expanded and many new operations were put underway. As more and more of the desirable acreage was secured, attractive bonus payments were made for lease blocks meeting requirements of operators. At about this time a point of saturation was reached and the development spilled out into the Mid-Continent picture.

Early activity in the western states was based too closely upon eastern practice and economy. This resulted in initial difficulties of control through the encountering of problems peculiar to the Mid-Continent, the majority of which have since been overcome. Also, transplanting the development produced an exaggerated idea of the value of much of the possible acreage.

Immediately preceding the present out-of-balance trend in crude, eastern operators allowed some proposed developments to enter the stagnant class. Operations in general were curtailed, only those with unusual possibilities being pushed. Recent cut back in refinery runs resulting from filled lube oil storage and minimum demand decreased prospects of early resumption of normal secondary development although this is definitely only an enforced lull.

Gas Repressuring Increases

In addition to advancement in flooding, excellent results are being obtained with gas repressuring. In the vicinity of Titusville unusual recoveries have been made, and a number of additional gas projects are on paper. Venango County, which has probably had more wells drilled in proportion to its area than any other section in the world, is still in the picture, by reason of economies of newer methods.

It is interesting to note that along the fringes of known accumulations, as in both flooding projects and repressuring projects, reserves too low to be drilled profitably for ordinary production are now being developed. By newer applications the ability to deplete the pay strata to a degree not previously obtainable has brought much otherwise worthless acreage into the play; and this despite the greatly increased development cost.

To show variations in the picture, sands being flooded range from 1500 to 1600 feet near Bradford, and in the vicinity of Bolivar, New York, are more shallow. Some flooding is underway at 2000 feet. Sands are relatively regular to decrease normal hazards of development. Little gas is left in the flood areas, barely more than is sufficient for lease operation. In primary floods or areas of old activity, gas has been almost completely exhausted and many leases are being pumped with electric power from Niagara hydro-electric plants. Gravel water is obtained for the majority of floods.

There are approximately 2000 operators in the higher grade crude area now engaged in secondary recovery. These are evenly distributed from Wellsville, New York, through Bolivar, Bradford, Warren and through the Oil City area. Flood development costs between $2200 and $2400 initially under normal conditions. Bolivar and Bradford production is just about 100 percent flooded.

Cooperative Work Helps

To a large degree the life, and present and future production of the Pennsylvania-New York district is due to combined efforts of producers associations and to the sponsored Petroleum Research at Pennsylvania State College. The Bradford District Research Group has proven its value under the auspices of Bradford District Pennsylvania Oil Producers Association. Cooperation for the general good of all is becoming more prevalent, coming to the front with strides in methods. Knowledge and facts are being disseminated to mutual advantage.

Basic methods of production are still accounting for runs from other sections of the greater area. The old wells along the banks of the Allegheny are still being produced from the Oil City bridge through the Butler-Armstrong district. Flankage production along the general trend is still being sought. Many relatively small and unimportant pools have been discovered since 1925, a large number of these resulting from coring operations investigating the feasibility of secondary methods.

Some 1000 barrel production opened near Bradford last year to highlight eastern activity for a brief time, was a result of redrilling. Subsequent drilling proved the accumulation was narrow, and not long enough to sustain high rates of production. Other completions were held back, no effort being made to produce the wells at maximum capacity. Swift decline was indicated through tests.

New Gas Reserves

The most successful exploration of deeper possibilities has been toward increasing gas reserves of the area. Important wells were completed in the New York Oriskany sand zone west of Corning, Steuben County. Wells have an initial open flow of between 15,000,000 and 40,000,000 cubic feet. In view of gas depletion throughout the area, and the market demand, the strike of a gas pool is relatively important.

Oriskany sand is an important gas horizon in the eastern trend, producing in West Virginia, Pennsylvania and New York. In southwestern Pennsylvania, where the strata is between 4400 and 4800 feet deep, active development is underway in Beaver County. The Tioga gas field, also producing from Oriskany to a depth of 5000 feet is well known.

By far the majority of wells, even those to depths below 4000 feet, are drilled with cable tools. Three rotary tests are now underway. Greatest depth reached has been around 7000 feet, with no encouraging shows encountered in the deeper strata. Despite this, the more favorable structures will continue to receive deep tests.

The operator in the east is looking toward an industrial situation that will bring about a resumption of secondary development. Steadied production by pumping in old areas is returning a smaller and smaller profit, and efforts to find untouched pools have not resulted in anything approaching a major find. Increased demand is a spur to gas development in Oriskany sand at depths considered relatively deep at 4500 feet. Rotary tools, although slowly working eastward, are still more or less a curiosity, and will only be accepted after proving capable of drilling eastern fields.

Economics of development, based upon present lack of adequate indications of an increase in the $1.30 to $1.80 per barrel spread in the crude price range, or in prolonged stability at the present price range, have momentarily slowed the pace of secondary recovery.

Drilling Industry

The United States Circuit Court of Appeals, tenth circuit, in *Southwestern Tool Company versus Hughes Tool Company*, affirmed the decree of the District Court of the United States for the western district of Oklahoma against the Southwestern Tool Company.

The United States Circuit Court of Appeals held that where parts repaired or replaced are separately covered by a patent, as is the case with the teeth on the cutters of Hughes cones, and Defendant welded new teeth to the cutters, the practice "is well outside the domain of permissible repair and restoration and plainly constitutes infringement."

Throughout more than the past quarter century—HUGHES ROCK BITS have been more than "Just Bits"—They have successfully carried the responsibility of Hole Making—throughout the Rotary Fields of the world

WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Mexican Oil Muddle

Court rejects labor contract suit of eight firms . . . Increase in oil imports worrying officials

Eight of the expropriated companies, the Huasteca, Eagle, Penn Mex, Richmond, California Standard, Consolidated, Stanford, and San Ricardo, lost their fight against action of the federal board of conciliation and arbitration canceling, at their employees' request, collective labor contracts a few hours before expropriation was decreed, when the second district court rejected their joint suit. The court, however, allowed the Agwi and Gas Combustible Imperio companies an injunction against the board's action.

The tribunal held that the board acted constitutionally with regard to the eight companies as they had been declared in rebellion because they had announced, prior to breaking off of the contracts, that they would not accept the board's wage award. The companies granted the injunction had not been declared in rebellion because they had not announced rejection of the board's pay ruling, the court held.

It is understood that the eight companies will appeal to the federal supreme court.

Alarm at a sharp increase in imports of oil and by-products since expropriation is expressed by the Mexican consul at Laredo, Texas, in a report to the ministry of foreign relations. He announces that during May, 548,982 kilos of crude, fuel and gasoline, gas oil, lubricants, etc., were shipped to Mexico from the United States for the accounts of the National Railways, refineries at Nuevo Laredo and here, the national irrigation commission and several private companies.

This report confirms rumors of considerable oil and by-products imports. There are unconfirmed rumors that a great deal of oil has been brought in, largely from the United States, by tankers.

Petroleos Mexicanos, the official oil company, announces exports since expropriation (March 18) to July 9 of 1,372,621 barrels of oil and 22,647 metric tons of asphalt. The announcement does not mention countries to which these consignments were made nor their buyers, but it reports that the movements were made in 57 steamers.

Though the government continues to be strangely secretive about production, not having issued any figures on the subject since expropriation, it is learned from reliable private sources that the output in May was around 1,500,000 barrels. It is understood that production took an upward swing late in May. No estimates for June production are as yet available from any source.

Reports published in Mexico City to the effect that the expropriated oil companies have paid off the key men, executives and semi-executives, they retained there and in other parts of Mexico, an action which was interpreted as signifying the firms had decided to quit, have been denied. It has been explained that the letting out of key men was only done by one small oil company, and that the men laid off were but a mere handful.

Other companies, it is stated, are keeping their key men on at full pay and intend to do so for an indefinite period.

The federal and states governments are preparing to increase to 52,000 kilometers Mexico's highway network of 12,500 kilometers, at an investment of 260,000,000 pesos (about $51,000,000), reports the ministry of communications and public works. Funds for this work, the ministry says, are to be obtained mostly from the gasoline consumption tax, proceeds from which jumped from 3,000,000 pesos in 1925, when Mexico began her modern highway program, to last year, making a total of 162,356,746 pesos from 1925 up to last July 9, and sales of federal highway bonds. With the marketing of 10,000,000 pesos worth of these bonds this year, the government expects to have at least 80,000,000 pesos available from this source for the road jobs, which are to include trunk and local highways.

Warning that expropriation of the oil business is but a phase of expropriation of all industries that are necessary for the federal government to carry out its program is given in a very pointed article "The Oil Question" by Lic. Luis Cabrera, ex-minister of finance and a ranking lawyer, in a local popular magazine. He writes in part:

"The idea of drafters of the 1917 constitution was that the nation would be the potential owner of the subsoil, but that exploitation of oil would be made by means of private concessions, thus establishing private property of oil, similar to the private property of mining. This policy was expanded to the government establishing federal oil reserves . . . Creation of Petromex made the government an owner of oil by means of a private company . . . There was a tendency toward Mexicanization of the industry when Gen. Cardenas' administration began. The idea of Mexicanizing not only the oil but all extractive industries of the country, is not new: it had been spoken of for some time . . .

"It is no secret that all, absolutely all, the officials who had to do with the oil conflict knew beforehand that the companies would not accept the award (of the federal board of conciliation and arbitration on workers' wages and other demands) nor would they comply with the opinion of the committee (three government appointees who investigated the companies' financial condition). The proposition, then, was not to find a solution of the conflict but to create a situation which would have no other outcome than expropriation of the oil properties . . . The workmen, the real workers, desired that the award would be complied with for it would be very advantageous to them. The leaders, especially the great leaders, preferred that the companies did not comply and that because of this the companies would be embargoed, intervenors appointed, or that the companies would be declared bankrupt and that a syndical committee would be appointed to administer the affected companies. This would have put the administration of oil into the hands of Lic. Vicente Lombardo Toledano and other leaders of the C. T. M. (Confederation of Mexican workers). But as these propositions were contrary to the policy of industrial socialization of the president of the republic, he violently decided upon expropriation as the only means of preventing the administration of oil passing into the hands of the labor leaders . . .

"It is very important to point out that all wage increases and benefits the award allowed the workers have not been put into effect . . . and that the president of the republic has advised the workers that the time has arrived for them to make great sacrifices. Fundaments of the expropriation decree are of a legal nature, but the political fundamentals of it have been officially stated by Mr. President, his publicity department and by the ministry of foreign relations in the various diplomatic notes it has published. These

fundamentals boil down to the government calling the oil companies rebellious and pointing to the advantageous situation of foreign enterprise that long exploited oil without true benefit to the country.

"Reviewing all these fundamentals leads us to the conclusion that,

"The oil conflict was the only legal basis the government found for expropriation; the true motives for expropriation are found in the general policy General Cardenas is following with regard to industry in general; the expropriation law is but a chapter in the general program of socialization of the soil and of production sources that form the political ideal of the present government, and that expropriation of the oil industry is but a chapter in the expropriation of all industries that will be required to carry out this program."

Canadian Fields

Well preparing to test McDongall-Segur sands at Turner Valley . . . Field's largest well found

Following an oil show, Phillips Petroleums Ltd.'s 1, Legal Subdivision 16, Section 16, Township 20, 3-w5, will make the first test of the McDongall-Segur sands in Turner Valley since discovery of crude oil in the Alberta field more than two years ago. Crude production at other wells of the Canadian field is from the lower Madison limestone.

In the northwest part of the field, a mile south of Royalite Oil Company Ltd.'s 29 which proved a large area when brought in several months ago, the Phillips outpost encountered the McDongall-Segur at 6950 feet, set casing to that depth and was drilling out the plug as the week closed. The sands to be tested are found in the lower Blairmore series, just below the Stockmen's sand, and at Turner Valley crude wells to the south are generally between 5500 and 6000 feet. Present depth of the Phillips well indicates it will strike the Madison, if drilled to that formation after testing at its present level, considerably deeper than the average Valley crude well. Production at its present depth, or on deepening to the Madison, would provide a further stimulus for drilling in the neglected north end of the field.

Production records in Turner Valley fell last week when the recently-completed Frontier Royalties Ltd.'s 1, Legal Subdivision 11, Section 16, Township 18, 2-w5, produced 7617 barrels on the last day of a Provincial government test. It was the first time the 7000-barrel mark had been topped in the history of the two-year-old field. Potential has been set at 5078 barrels, established at two-thirds capacity, and allowable under the present 37 percent proration is 1879 barrels. Bottom is at 6915 feet.

Extending the known producing area of the southwest flank a mile north and west of the Turner Valley Royalties discovery well when completed several weeks ago, a production test after acid treatment revealed Royalite Oil Company Ltd.'s 30, Legal Subdivision 11, Section 32, Township 18, 2-w5, bottomed at 7508 feet, to be the field's eighth largest well. Open flow was 2277 barrels, from which a potential of 1518 feet was set. Production before treatment was 501 barrels daily.

This company has started preliminary work for its No. 34 on Legal Subdivision 7, Section 5, Township 19, 2-w5, a location south of Vulcan-Brown Petroleums Ltd.'s sizeable producer and a location west of Mercury Royalties Ltd.'s 1, drilling in the limestone. The area is northwest of older producers in the southwest pool and received a setback by failure of Dalhousie Oil Company Ltd.'s 1 last year and Brown Oil Corporation, Ltd.'s 3 early this year to obtain commercial production. The Mercury Royalties well was drilling at 6317 feet, of which 203 feet were Madison lime. Nearby, East Crest Oil Company Ltd.'s 4, Legal Subdivision 8, Section 6, Township 19, 2-w5, was drilling at 2330 feet.

Two other new Turner Valley tests were announced last week: J. & J. Syndicate will drill on the SE¼ of Section 12, Township 16, 3-w5, acreage subleased from Waite Valley Holdings Ltd. The well is in semi-proven area and an offset to the old Cristy well which was lost in 1922 with 2000 feet of oil in the hole because of mechanical difficulties. Lease Holdings Ltd. was moving the derrick from Hunter Valley Oil Company's wildcat near Olds for a test on Legal Subdivision 2, Section 21, Township 18, 2-w5. Jones & Quinn will drill the test.

Oklata Oil Company Ltd.'s 6, Legal Subdivision 3, Section 30, Township 18, 2-w5, became the deepest well in the British Empire, having passed the 8998-foot depth of Arca Development Company Ltd.'s wildcat on the High River structure which was abandoned as dry a year ago. The outpost, west of large producers on the southwest flank, was reported logging favorably and at last report was at 9170 feet. The derrick to the crown block and the floor were reinforced last week. Ease with which the tools are drawn from the hole indicates it is running straight. A deep fault was drilled through, necessitating the deep drilling. The Madison is expected between 9400 and 9500 feet.

Wildcat interest was centered on Royalite Oil Company Ltd.'s Lethbridge Southern 1, Legal Subdivision 8, Section 1, Township 8, 21-w4, being drilled on the Oxland farm near the Lethbridge municipal airport, which encountered the Madison lime at 3995 feet, 100 feet higher than expected. Casing was run and cemented. The wildcat, if successful, would open a new Alberta structure. In the same section of the province, North Taber Royalties Ltd.'s 1, spudded in a week ago, was making good progress. It is being drilled with modern equipment and expects the Madison limestone at about 3000 feet. If production is not obtained in that formation, it will be carried to 5000 feet for a thorough test of the new structure.

The most northerly drilling test in Alberta, Guardian Oils Ltd.'s wildcat on the Pouce Coupe structure, Section 7, Township 80, 12-w6, drilled through a 3-foot stray sand topped at 938 feet. It was at 980 feet at last report, expecting the St. John sand at 1035 feet.

Standing at 2400 feet since 1923, the old Canadian Western Natural Gas, Light, Heat & Power Company's 6 was re-opened by Border Petroleums last week and will be carried down to the Madison limestone where crude production is expected. Ten-inch casing was in the hole, which was found to be in excellent condition. Location is Legal Subdivision 5, Section 32, Township 19, 17-w4.

Ram River Oils Ltd. will start a wildcat test on another structure, 25 miles west of Rocky Mountain House, just as soon as 4 miles of road can be completed to the location. The location is in unsurveyed territory, on Tawadina Creek, 14 miles southwest of Phoenix, Alberta. Actual drilling is expected to start in August, with the start to be made in the Banff Shales, just above the Devonian lime. Production is expected before 3000 feet.

Organization of two new oil companies is reported in the current issue of the Alberta Gazette: Freehold Royalties No. 7 Ltd. will maintain its head office in Edmonton, Alberta, with British Columbia offices in Vancouver. Authorization to issue 25,000 shares of $1 par value has been granted. South West Holding & Development Company Ltd. has been authorized with a $10,000 capital and will make its headquarters in Calgary.

Oil Found in Scotland

London (UTPS).—Three and a half barrels of crude oil were produced during testing operations at the experimental well at Dalkeith, Scotland, recently. The Anglo-American Oil Company, who is doing the drilling work, state that the oil came from oil sands at 1733 feet to 1760 feet below the surface.

Engineers engaged on the work are not yet able to appraise the commercial significance of the discovery and testing operations are to be continued. These will consist of swabbing and vacuum pumping, and, if conditions warrant, the oil sands will be shattered and opened up by exploding 100 to 200 of nitro-glycerine in the well.

The crude oil struck, it is stated, is of apparently good quality and rather heavy, but the percentages of petrol and other constituents are not yet determined. The well was drilled to a total depth of 3857 feet, but on testing the lower sands gave only gas in quantities up to 4,000,000 to 5,000,000 cubic feet a day. These sands are temporarily plugged off to allow the present shallower tests for oil.

Optional RENTAL-PURCHASE EQUIPMENT SUPPLY SERVICE

• • TO SAFEGUARD YOUR BUYING AND MAKE YOUR MONEY GO FARTHER

Many items in our used equipment department (sometimes new equipment) may be obtained on rental basis with the option to purchase within the rental period. Ordinarily no rental is charged when purchase option is exercised. The Rental-Purchase contract makes the choice yours—rent for convenience and safety, then buy if to your advantage to do so.

The Opportunities available through the use of our Rental-Purchase Service for safer buying, for lowering investments and for reducing costs are almost unlimited.

When your need arises, telephone us—find out whether or not this service may be used to accomplish your ends.

HERE'S HOW

The rental fee on five miles of used 4-inch Line Pipe was only a fraction of the purchase price when a drilling contractor found he needed the pipe for only one well, yet he was protected with an option to purchase.

HERE'S HOW

An operator satisfied himself with the equipment, assured himself of additional work, before exercising his option to purchase, after using a complete drilling outfit on rental basis.

HERE'S HOW

On a Rental-Purchase contract a nominal rental fee was the only investment in an expensive string of pipe when the semi-wildcat came in dry. In another instance the rental expense was eliminated when the well came in a producer and the pipe was left in the hole.

HERE'S HOW

In addition to the commonly used rental tools, almost every conceivable item of equipment—Boilers, Derricks, Engines, Pumps, even complete rotary rigs—have been rented for emergency requirements on our flexible Rental-Purchase arrangement.

BRIDGEPORT

The BRIDGEPORT MACHINE COMPANY
Factory and General Offices, Wichita, Kansas

HOUSTON
L. D. 203 Local "Cap" 1301

DALLAS
L. D. 584 Local 2-4282

SAN ANTONIO
L. D. 219 Local "Gar" 5671

CORPUS CHRISTI
L. D. 31 Local 574

SHREVEPORT
L. D. 15 Local 6481

ODESSA
L. D. 683 Local 684

TULSA
L. D. 681 Local 5-3204

OKLAHOMA CITY
L. D. 785 Local 7-2725

WICHITA
L. D. 59 and 116
Local 2-1431 and 2-1432

AND BRANCH STORES

MEN IN THE INDUSTRY'S NEWS

C. C. HERNDON, executive vice president of Skelly Oil Company, headed a party of executives which has returned from an extensive field trip which carrried them to Hobbs, New Mexico. At that point W. G. Skelly, president, joined the party by airplane.

Others in the group were Arch H. Hyden, vice president; J. M. Stalcup, vice president; John S. Freeman, production superintendent; O. E. Evans, assistant production superintendent; James E. Vaiden, superintendent of natural gasoline plants; Don N. Hill, assistant manager of the land department; W. S. Arthurs, chief scout.

S. F. SHAW has returned to Oklahoma City from the Corpus Christi field where he was investigating gas-lift problems, and will continue to the Turner Valley field, Canada, in another week, to be absent about two weeks, in connection with work of Anglo-Canadian Oil Company, Ltd.

JOHN F. CAMP, president of Camp Drilling Company, San Antonio, was host to several hundred in the oil industry in South Texas at a stag barbecue at the Mathis State Park, near Mathis last Wednesday afternoon. The barbecue was in honor of C. V. Terrell, candidate for re-election to the office of Texas Railroad Commissioner. The affair also was a celebration by the men employed by the various Camp interests, including the pipe line, production and drilling divisions.

GEORGE R. PINKLEY, district geologist with Fohs Oil Company, has returned to San Antonio after a busines trip to Missouri.

T. C. HUDDLE has been placed in charge of the office recently opened in the Alamo National Building, San Antonio, by W. B. Osburn, oil operator, who is moving general headquarters from Ada, Oklahoma.

EDWARD W. SENG, assistant chief clerk, accounting department, of Huasteca Petroleum Company at Tampico, Mexico, for a number of years past, has been transferred to the Standard Oil Company of Venezuela. He will be stationed at Caripito.

MAURICE MIESSIE, scout for Phillips Petroleum Company in the Greater Seminole area, Oklahoma, has been transferred to Owensboro, Kentucky.

E. L. SHEA, executive vice president of Tide Water Associated Oil Company, New York, is visiting Mid-Continent and Texas oil centers. Last week he met E. H. Salrin, vice president, in Tulsa, where Shea spent several days. The two left at the end of the week for Texas.

DORSEY HAGER, Centralia geologist, declared that only five of Illinois' 12 new fields have been defined and intensively developed. An estimated 50,000 acres of new oil land has been discovered in the state, half as much as was opened in 30 years previous.

MAURICE TEIS has accepted the post as chief geologist of Home-Stake Oil & Gas Company and Home-Stake Royalty Company, Tulsa. He succeeds J. K. Murphy who resigned to become chief geologist of British American Oil Producing Company.

Teis has been with E. H. Moore, Inc. as chief geologist. After graduation from

MAURICE TEIS

the University of Oklahoma in 1930 he spent a year at the University of Chicago. His first work in the oil industry was with Phillips Petroleum Company. After joining E. H. Moore, Inc. in 1935 he did work in the Fitts field and in Western Kansas before coming to Tulsa headquarters.

A. JACOBSEN, president, New York, and Allmand M. Blow, vice president, Tulsa, Amerada Petroleum Corporation, are covering Louisiana and Texas territory as part of a swing through oil country. They will be in Tulsa, production headquarters, after covering the other states.

A. J. NESBITT, a director of Anglo-Canadian Oil Company, Ltd., left Montreal, Canada, for England last week to attend sessions before the Privy Council on Alberta legislation.

DR. G. S. HUME, of the Canadian department of mines and resources, who has conducted geological surveys in Turner Valley, Alberta, since 1924, declared last week when addressing a group of Calgary, Alberta, businessmen, that proration of production in Canada's sole major oil field was necessitated by present market conditions and was established "on a very fair basis." He added that "to establish a reserve for large markets, it would be a fine thing if more fields could be developed."

GEORGE M. VANDAVEER, JR. has resigned as petroleum engineer with E. H. Moore, Inc. Vandaveer joined the Moore organization in the early development of the Fitts pool. Previously he had been with Stanolind Oil & Gas Company and spent considerable time in the Texas Gulf Coast area. He is a graduate of Wyoming University, class of 1925. He spent several years in both oil and gas engineering work in the Rocky Mountain area and in Canada before coming to the Mid-Continent.

K. R. TEIS, E. H. Moore, Inc., with Mrs. Teis and son will sail on a month vacation in Honolulu, leaving from the West Coast about July 22. At present Teis is making an inspection of E. H. Moore properties in California.

F. F. REEVE, Calgary, was named president of Commonwealth Petroleums, Ltd., Alberta producing company, during the company's annual meeting held in Calgary last week. He succeeds D. J. Young. Other officers are: Mr. Young, vice president; G. J. McKay, secretary; E. B. Allan, treasurer, and G. T. Wright, director.

GEORGE E. WELKER, president of United Natural Gas Company, on July 11 assumed the presidency of the Oil City (Pennsylvania) Rotary Club.

HAMMOND E. CHAFFETZ, special assistant to the attorney general, who during the past eight years has been connected with many of the important anti-trust actions brought by the Department of Justice, will leave the government service July 15 to engage in the practice of law in Washington, it was announced by Attorney General Cummings, July 8.

Chaffetz has appeared for the government in the Madison oil cases with Special Assistant to the Attorney General, John H. Lewin, who will remain in charge of the oil litigations.

E. R. TURNER, with Pan-American Oil Company, Houston, is spending his vacation in Arizona and New Mexico.

FRANK PHILLIPS, chairman of the board, Phillips Petroleum Company, has announced donation of a fund of $100,000 to the Boy Scouts of America. The money was provided through the Frank Phillips Foundation, Inc., after Clay Smoot, treasurer, had conferred with James Fitch, regional director of Boy Scouts of America at Dallas. The two will direct expenditures of the fund, which will go largely to scout organizations and camps in Oklahoma and the Texas Panhandle.

Recently Phillips made a second donation of $2,000 to a scout camp at Madison, Wisconsin. His first donation was used to build a clubhouse which burned shortly after completion. Upon learning of the fire, Phillips provided money to rebuild.

W. F. CLINGER, president of Clinger Oil & Gas Co., Warren, and vice president of Superior Oil Works, Warren, was re-elected president of the Pennsylvania Grade Crude Oil Association when direc-

tors held their annual meeting in Oil City last week. It is his second term as head of that body. Other officers named are Parker L. Melvin, Towne-Melvin Oil Company, Bradford, and Otto Walchli, Wellsville, New York, vice presidents; John A. Beck, Pennsylvania Refining Company, Butler, recording secretary; S. Messer, Quaker City Oil Refining Corporation, Oil City, treasurer; W. R. Reitz, Quaker State Oil Refining Corporation, Oil City, assistant treasurer, F. B. Dow, Washington, D. C., general counsel; J. E. Moorhead, Oil City, executive secretary, and S. A. Hartwell, Jr., Oil City, assistant secretary.

Directors voted to hold the 1939 annual meeting at State College, Pennsylvania.

EDWARD L. MOREND, pipe line superintendent of Mexican Gulf Oil Company, at Tampico, Mexico, is spending a vacation in the United States. He is now in San Antonio, Texas.

EMERSON LEWIS, who has been employed as driller by various oil companies in Mexico for the past fifteen years, has accepted a position with Shell interests in Cuba.

WILLIAM H. CURRY, geologist for Wellington Oil Company, discussed the Cretaceous stratigraphy of Maverick County and the Chittim anticline at a meeting of the South Texas Geological Society at San Antonio Friday. The Wellington Oil Company earlier in the year completed two Glen Rose sand producers on the Chittim ranch in Maverick County. Both wells made gassers spraying distillate from below 5600 feet.

HON. N. E. TANNER, Alberta minister of lands and mines, Edmonton, was in Calgary, Alberta, last week to confer with officials of the recently-created Provincial Oil & Gas Conservation Board.

RAY E. TANSEY, auditor of Sinclair Pierce Oil Corporation at its Tampico, Mexico, refinery, is spending a vacation in Missouri.

HAROLD J. WILKINS, secretary and treasurer of Compania de Gas y Combustible Imperior S. A. (subsidiary of Cities Service Company) has returned to his headquarters at Tampico after a vacation spent in the United States.

GOVERNOR JAMES V. ALLRED of Texas has been named by President Franklin D. Roosevelt as Federal Judge for the new district of Southwest Texas created by the last Congress. Allred indicated last week that he would not resign as Governor until after the second Democratic primary which is on August 27. How long he might serve thereafter was undecided. Walter Woodul, Lieutenant-Governor and candidate for Attorney General, will fill the Governor's unexpired term.

J. N. TROXELL, division geologist for The Texas Company at Tulsa, has been transferred to headquarters at Houston. He will be succeeded by H. H. Arnold, Jr.

SAM A. RAITMAN, operator in the Illinois basin area making his headquarters in Olney, was in Dallas last week.

C. P. McGAHA, head of Fain-McGaha Oil Corporation, Wichita Falls, and president of the Texas division of the Mid-Continent Oil & Gas Association, was guest speaker at membership meeting of the Chamber of Commerce of Fort Worth on July 13. He attributed Fort Worth's favorable economic situation to oil development within its trade territory.

D. HAROLD BYRD, member of the firm of Byrd & Frost, Inc., returned to Dallas headquarters last week after a combination business and pleasure trip in Europe. Byrd is also an official of Talco Asphalt & Refining Company, which has a plant at Talco, Texas.

CHAS. F. ROESER, president of the Independent Petroleum Association of America, Saturday announced the personnel of the Domestic Asphalt Committee of the association with T. M. Martin, vice president, Lion Oil Refining Company, El Dorado, Arkansas, as chairman; and L. H. Prichard, president, Anderson - Prichard Oil Corporation, Oklahoma City, Oklahoma, as vice chairman.

The following are the members of this committee: W. H. Morgan, R. R. Bush Oil Company, Long Beach, California; J. B. Arthur, Union Oil Company of California, Los Angeles; H. B. Pullar, vice president, Berry Asphalt Company, Chicago; R. W. Leslie, director of research, Skelly Oil Company, El Dorado, Kansas; F. W. McCurry, Derby Oil Company, Wichita, Kansas; Paul G. Blazer, president, Ashland Refining Company, Ashland, Kentucky; J. L. Quinn, Standard Oil Company of California, New York; L. P. Calkin, sales division, Phillips Petroleum Company, Bartlesville, Oklahoma; W. D. Richardson, vice president, Cosden Oil Corporation, Fort Worth, Texas; and J. K. MacKinnon, Talco Asphalt & Refining Company, Mount Pleasant, Texas.

Said Mr. Roeser, "The necessity for this committee developed on account of the condition that existed of excessive imports of oils and asphalt which were taking a large share of the domestic market. It is the opinion of our association that the governmental agencies in making purchases for governmental work should give preference to domestic materials on the theory that money with which these supplies are being purchased was supplied by taxes from the domestic industries."

DIED:

LOGAN W. CARY, 54, Oklahoma City oil producer, died there July 7 following illness of a week. He was president of Consolidated Gas Utilities Corporation, Wicklieffe Oil Company, Carson Petroleum Company and Natural Gas Development Corporation. He came to Oklahoma City in 1919 from Louisville, Kentucky.

JOHN JOSEPH HARVEY, 63, one of the organizers of Oil Creek Refining Company, died July 5 at his home in Titusville, Pennsylvania. He is survived by his wife, a daughter of the late Joseph Seep, prominent in the Pennsylvania oil industry, three sons and a daughter.

C. F. CAMP, secretary of the Arrow Drilling Company, died July 11 in Tulsa following an operation for amputation of his left leg. An injury from a football accident was responsible for the operation.

Camp, a native of Roanoke, Virginia, came to Tulsa at the close of the World War. He entered the oil field equipment business as a salesman and in 1925 formed the C. F. Camp Company, whose principal business was distribution of internal combustion engines for oil field use. In 1931 he became secretary of Arrow Drilling Company. During his activity in the equipment field he acquired oil producing interests over the Mid-Continent.

ELMER E. BRYNER, 76, one of the pioneer operators in the Bradford field, died at his home in Custer City, Pennsylvania, July 8. He had suffered a heart attack a week earlier. He began work in the oil fields in the Pithole territory as a boy, coming to the Bradford area in 1877. He later became manager of Quintuple Oil Company and Lewis Emery, Jr. oil interests, and at the time of his death was manager of Minard Run Oil Company. Survivors include his wife, two sons and a daughter.

HAROLD WALKER, a member of the legal department of Standard Oil Company of New Jersey, died July 8 in a New York hospital following a short illness. He had been first vice president of Pan-American Petroleum Company, and joined the Standard company in 1932.

JAMES V. HUFFMAN, 79, who supervised the sinking of the first well at Terre Haute, Ind., and well known as an oil operator in Indiana for 52 years, died in Coffeyville, Kansas, July 5 of a heart ailment. He had been a director of Sun Oil Company.

WILLIAM J. RODGERS, 69, operator in the Tri-state area of Indiana, Illinois and Kentucky, died July 1 in Evansville, Indiana, after an illness of two years. He had suffered a paralytic stroke three weeks previously.

W. M. "MAC" PRICE, well known oil operator of Allendale, Illinois, died July 4 in a hospital at Evansville, Indiana, following a lengthy illness. Surviving is one son.

I. P. A. to hold four regional meetings

Four state meetings of Independent Petroleum Association of America scheduled during the last week of July: at Artesia, New Mexico, July 22, with J. C. Dexter, vice president in charge; Shelby, Montana, July 23, with W. M. Fulton, vice president in charge; at Casper, Wyoming, July 26, with V. M. Kirk, director, in charge; at Denver, July 26, with Warwick M. Downing, vice president, in charge. The meetings at Artesia and Denver will be attended by H. B. Fell, executive vice president, and Charles Van Fleck, field manager, who will discuss national problems. Russell B. Brown, general counsel, Washington, and C. E. Buchner, executive manager, Tulsa, will discuss national problems at the other two meetings.

THE WEEK'S NEWS SUMMARIZED

Courts

Consideration of routine cases will delay the third projected "oil conspiracy" investigation by Madison, Wisconsin, grand jurors. Meanwhile, preparations indicating the jury would be busy for some time were in evidence. Rooms in the federal buildings were made available to employes of the anti-trust division of the Department of Justice. Meanwhile, 30 major oil company officials found guilty last January of conspiracy to violate the anti-trust laws were prepared to appear in Madison July 19, at which time the federal court will rule on motions filed in behalf of the defendants after their conviction.

Dilution or processing of natural gas, basis for criminal action and a large damage suit in Ohio, was defended in an engineers' report filed with the Ohio Public Utilities Commission in a gas rate case. The report declares the mixing of natural gas with a small amount of flue gas produced a better product and kept prices lower.

Pennsylvania's Oil Industry Investigating Commission, which was declared illegally created a week ago, is seeking a lease on life by asking the Supreme Court for re-argument of the case.

Allowables

Whether the Sunday shut-down program in Texas will be continued during August will be the most important question before the statewide hearing to be held July 18. At the June hearing some pressure was brought on the commission to lift both the Saturday and Sunday shutdowns, and the former was discontinued. This brought a sizeable increase in production. While some believe the Sunday shut-downs could be lifted, others think such a procedure would result in a two or three day a week shut-down during the late months of the year.

Kansas again is threatening to quit the Interstate Oil Compact Commission. Further questioning of the functions of the commission by Governor Hoxman has given the impression the next quarterly meeting of the compact members, Colorado Springs, July 29-30, may be the last at which this state is represented. He urged the state take a positive stand, and insisted the commission consider the oil problem as it affects all states.

Smashing all barriers in an effort to outride the depression, the producing branch of the industry in May got its output down to the lowest daily average in 15 months.

The refining branch, however, according to the monthly report of the Bureau of Mines, has made little progress in combating the fast rising gasoline stocks, crude runs to stills being so far above output as to result in a substantial decline in above-ground crude stocks.

Markets

The market situation remained relatively favorable, although the recent upward trend of refined prices was interrupted and there were a few local crude price reductions.

Refined prices were largely unchanged. Postings for two Wyoming fields and one Texas Gulf Coast field were reduced, while pipe line proration of purchases was applied in an Oklahoma field.

The industry still remains in a good inventory position, although United States crude production has risen sharply during July due to less strict allowables. During the week ending July 9, latest date for which figures are available, gasoline stocks dropped 700,000 barrels despite the higher yield at wells.

The small independents have played an important part in retaining competition in the oil industry, aided to considerable extent by technological progress, according to the Brookings Institution.

So long as the independent exists, it concluded in a report on the price situation generally, competition will be maintained, even in the face of a probable desire on the part of some of the big companies to regain the position once held by John D. Rockefeller and his Standard oil.

Pipe Line

A $20,000,000 loan from the Reconstruction Finance Corporation may be sought for the purpose of constructing a natural gas pipe line from southwestern Kansas to northern Minnesota. The line would supply natural gas to communities and industries along its proposed route through Nebraska, North and South Dakota and Minnesota, but is expected to be opposed by coal interests.

News Section Index

General News ..... 45 to 51

Allowable Picture 47
Oil in Legal Circles..... 46
Labor Situation..... 46
Market Situation 48
Crude Production..... 51

World Developments ..... 40 and 41

Field Development News ..... 53 to 75

Arkansas 64
California 54
Eastern States..... 67
Illinois 66
Kansas 56
Louisiana Coast 62
North Louisiana..... 63
Michigan 69
New Mexico 70
Oklahoma 55
East Texas 59
Texas Gulf Coast..... 61
North Texas 57
Panhandle Texas 58
Southwest Texas..... 60
West Texas..... 58
Rocky Mountains..... 68
Wildcat Drilling Report.... 72

In Legal Circles

Monopoly investigation data not to be used for court action . . . Third Madison jury takes up routine matters before considering oil affairs

Arnold outlines monopoly probe

Denying that the administration's monopoly probe is to be a "fishing expedition," Assistant Attorney General Thurman Arnold last week reassured members of the oil and other industries that are to be investigated that no testimony given before the monopoly committee will be used as a basis for possible criminal action by the Department of Justice.

"The monopoly investigation," he said in an interview, "is intended to gain information looking toward remedial legislation. There is absolutely no thought in the anti-trust division of ferreting out information at hearings conducted by the monopoly committee and using such information for possible criminal prosecutions under the anti-trust statutes at a later date."

As a matter of fact, he added, the department at all times is fully conversant with what is going on in the various industries, and it is easier for it to secure its information by the methods it habitually follows.

"It is a tremendously important matter that business and leaders of industry have the idea dispelled that the Department of Justice is seeking to use the monopoly probe as an instrument with which to obtain evidence for future prosecutions," Arnold declared.

Lists Reasons

"Briefly, I list the following as very good reasons why no such efforts could be made by the department:

"1. Evidence for prosecutions must be gained by tedious and painstaking efforts of a staff of experts over a period of months, even years, in the particular industry which is under investigation. The monopoly probe, conducted by the congressional-department committee, cannot go into such highly specialized fields.

"2. It would destroy the usefulness of the general investigation, because we could not get the necessary cooperation from industry which we need.

"3. Grand jury investigating is a far better, quicker and more thorough method of gaining information which will stand up as evidence before the courts than would an investigation of the type contemplated by the members of the monopoly committee."

Further, the assistant attorney general added, the department does not look to the investigation to develop "leads" for cases. The department has no dearth of "leads"; they come in every mail. It would be impossible for the committee hearings to develop any situation about which the department does not already have a complaint from some interest.

At the same time, if anything develops during the hearings which appears to need further investigation, the department will take the matter up, since it is obligated by law to use such information as comes to its notice; however, anything which develops at the hearings can easily be ascertained from other sources, so that the testimony of witnesses will not be used.

"It is my most earnest desire that nothing happen which would hamstring the beneficial results which will come from the hearings of the joint congressional-departmental monopoly committee," Arnold concluded. "Business has my pledge that the anti-trust division of the Department of Justice is not seeking evidence for future prosecutions through the monopoly probe and that we are not seeking leads for new investigations through the committee's hearing."

Madison jury investigation of oil delayed a week

Grand jury investigation of a projected third "oil conspiracy" case will not start until this week, it became apparent when 21 grand jurors reported for duty in federal court at Madison, Wisconsin, July 12. United States District Attorney John J. Boyle said presentation of between 40 and 50 routine cases would occupy the jury for at least a week.

Meanwhile, preparations indicating the grand jury would be busy for some time were in evidence. Rooms in the federal building occupied by the securities and exchange commission were vacated last week to make room for officers and employes of the anti-trust division of the department of justice. Federal Judge Patrick T. Stone excused one juror, instructing him to be available for duty on August 1.

Meanwhile, 30 major oil company officials found guilty last January of conspiracy to violate the anti-trust laws through operation of buying programs in the East Texas and Mid-Continent fields and their attorneys prepared to appear in Madison Tuesday (July 19). At that time, Judge Stone will rule on motions filed on behalf of the officials and 16 major companies which seek freedom for the defendants or a new trial.

Should the court overrule the defense motions, sentence may be passed this week.

Engineers uphold dilution of gas in Ohio gas rate case

Dilution or processing of natural gas, basis of a criminal action against Ohio Fuel Gas Company and several of its officials and of a $42,000,000 damage suit against Ohio Fuel Gas and five other Columbus Gas & Electric Company affiliates, was defended in an engineers' report filed with the Ohio Public Utilities Commission last week. The report was offered in a gas rate case now before the commission.

The report declared that mixing natural gas with a small amount of flue gas produces a better product and keeps prices lower. "It is necessary to add a stabilizing agent to maintain the market gases nearer the point of perfect interchangeability," the report said. "The addition of this stabiliz-

Labor Situation

Employes of Pure Oil's Muskogee plant and the Gulf's Port Arthur refinery will select unions

Recent labor activities were primarily confined to several labor hearings, no other developments of importance having taken place during the past week.

NLRB Orders Pure Oil Company Vote

As a result of the recent hearing at Pure Oil Company's Muskogee, Oklahoma, refinery, the National Labor Relations Board last week ordered the company to cease interfering with self organization of employes at the refinery and to dis-establish the Employes Federation of the company as representative of any of its employes. The board directed an election among all employes except clerical and supervisory employes to determine whether they desire representation by the Oil Workers International Union, a C.I.O. affiliate.

Charges that the company unlawfully refused to bargain collectively with the affiliated union on July 13, were dismissed.

Gulf Employes Plan Vote to Name Union

More than 2600 of the Gulf Oil Corporation refinery's employes at Port Arthur, Texas, will vote July 28-29 in a National Labor Relations Board election to choose an agency to represent them in conferences with the company, according to an agreement reached last week between attorneys for the C.I.O. Oil Workers International Union, railroad trainmen, American Federation of Labor craft unions, independent unions and company attorneys.

ing agent does not alter the general character of the natural gas."

The engineers pointed out that the Columbus ordinance under which the Ohio Fuel Gas Company provides service, specifies that natural gas distributed for sale "shall have a heat value of not less than 900 British thermal units per cubic foot. We find that the gas now being distributed contains about 1050 British thermal units per cubic foot, of which 1041 are obtained from the unchanged natural gas and nine from the stabilizing agent.

A recent Fort Worth, Texas, case was cited by the report: "With reference to this and other questions involved, we cite the recent decision of the Fifth District Court at New Orleans, review of which decision was refused by the United States Supreme Court, wherein a similar situation (the right of the Lone Star Gas Company to stabilize its gas) was sustained."

Pennsylvania investigators to re-argue their case

Pennsylvania's Oil Industry Investigating Commission, declared a week ago to have been illegally created by the 1937 legislature, last week sought a new lease on life through a petition to the state supreme court for a re-argument of its case. The court found that the commission had been created under a joint resolution, rather than a law.

Allowable Picture

Discontinuation of Sunday shutdowns important question for Texas hearing . . . July meeting of Compact may be the last attended by Kansas

Will Texas continue Sunday shutdowns?

Possible continuation of the Sunday shut-down program in Texas through the month of August will be the most important question before the statewide hearing to be held in Austin on July 18. Since last December shut-down orders have limited production to an average of six days a week, which has had a beneficial effect on market conditions generally.

When the shut-downs were instituted, it was believed that they could be lifted during the summer months, but many operators believe now that unless the shut-down is continued through August and the remaining months of 1938, producers will be faced with a two or three-day a week shut-down during the late months of the year.

At the last hearing pressure was brought to bear on the commission by a group of East Texas merchants and some oil men to lift both the Saturday and Sunday shut-downs. The announcement prior to the hearing that this would be done brought prompt expression from a majority of the producers who attended the hearing against the full increase. They were willing to accept the increase which would result from lifting the Saturday shut-down, but they insisted that the oil market was unable to absorb the additional production which would result from raising the Sunday shut-down as well.

Reports for the first week in July indicate that production was up more than 200,000 barrels daily, although crude stocks continued to decline and gasoline stocks showed a drop. Gas and fuel oil stocks were up again and refinery runs appeared to be relatively unchanged.

Some observers were inclined to believe that the Railroad Commission might lift the Sunday shut-down during the month of August as a political expedient, but the majority believed that there would be no change, and any increase in production would result from the completion of new wells.

Since commission allowables had been dominated by market demand for several months, it is likely that the trend will be determined by testimony presented to show storage conditions of crude oil, gasoline and fuel oil.

Kansas again threatens to quit Interstate Compact

Further questioning of the functions of the Interstate Oil Compact Commission by Governor Walter A Huxman of Kansas has given the impression that the next quarterly meeting of the body in Colorado Springs, July 29-30 may be the last at which this state is represented. The question was checked up to the Kansas Corporation Commission in a letter which suggested that the state take a positive stand and insisted that the commission "consider the oil problem as it affects all the states."

"Unless something of that kind is done," he added, "I seriously doubt the advisability of constantly attending these Interstate Oil Compact Commission meetings."

His estimate of the authority of the compact commission was:

"I do not see where the Interstate Oil Compact Commission has any authority which is binding upon any of of the states in the administration of the oil problems of the states. As it appears to me the commission simply is a voluntary association of the oil producing states where they meet for the purpose of exchanging ideas."

Pipe Line News

Ask $20,000,000 from RFC for Kansas-Minnesota gas line . . . Railroad fights new Rocky line

Seek loan for Kansas to Minnesota gas line

A $20,000,000 Reconstruction Finance Corporation loan will be sought for construction of a natural gas pipe line from Southwestern Kansas fields to the Mesaba iron range in Northern Minnesota, it was formally announced last week by Allen V. Junkin, St. Paul attorney and spokesman for the group proposing the project. An application has been drawn for the loan in the name of the Kansas Pipe Line & Gas Company of Chicago.

The line which would supply natural gas to communities and industries requesting it along its proposed route through Nebraska, North and South Dakota and Minnesota, was vigorously opposed by coal interests immediately when announced.

John D. Battle, secretary of the National Coal Association, said that locals of the United Mine Workers would be asked to protest the line on the ground that it would reduce coal consumption and increase unemployment in the mines. Similar protests came from West Virginia coal interests and other groups in that state. Clare L. Wildner, executive secretary of the Superior (Wisconsin) association of commerce telegraphed Senator Ryan Duffy, Democrat of Wisconsin, that the proposed line would "seriously affect hundreds of men working at the head of the Great Lakes," and asked that he oppose the loan.

"We are not ready to discuss details of the proposed line," said Junkin. "There's no mystery about it. Industrialists in the iron range are anxious to obtain natural gas to develop deposits and natural gas interests are anxious to sell it."

No application for permission to build the line has yet been filed with the federal power commission, officials said.

Railroad union protests Wyoming-Denver pipe line

Acting at the insistence of members of the Wyoming legislative board of the Brotherhood of Locomotive Firemen and Enginemen, Governor Leslie A. Miller, of Wyoming, last week protested to the interstate commerce commission construction of Continental Oil Company's proposed 245-mile oil pipe line to connect the Lance Creek field, Niobrara County, Wyoming, to the company's refinery in Denver.

Construction of the line, which is to cost an estimated $2,000,000, is to start shortly. It will have a carrying capacity of 10,000 barrels daily. The company now ships its crude to Denver by rail.

Market Situation

Upward trend of refined prices interrupted and local crude postings are reduced . . . Despite these developments markets are relatively firm

Markets firm although rising prices halted

The market situation continues relatively favorable, although there has been an interruption of the recently advancing prices of gasoline and some other products.

The crude oil markets remain generally firm, although the past week brought local reductions of prices in two Wyoming fields and a Texas Gulf Coast field, while pipe line proration of purchases was applied in an Oklahoma field. On the other hand, postings were increased slightly in two fields of the San Joaquin Valley, California.

Prices of refined products have continued mostly unchanged, although minimum tank car quotations on gasoline in the Chicago market have been marked back down ⅛-cent a gallon, after having been advanced similar amounts in each of several preceding weeks.

Since the Independence Day holidays, the demand for gasoline has been less brisk, and consequently, the formerly advancing prices have been halted. Contract shipments have continued relatively good, but spot sales of all grades have been relatively slow, while supplies have been more freely offered.

Natural gasoline has continued in fairly good demand, for fulfilling the requirements of refiners for pepping up gasoline held long in storage. However, some manufacturers have reported some slowing down of shipments.

The kerosene market has shown no material change lately, prices having held steady, although shipments have been relatively light.

Demand for light fuel oils also has been comparatively small, although some interest in those oils has been shown.

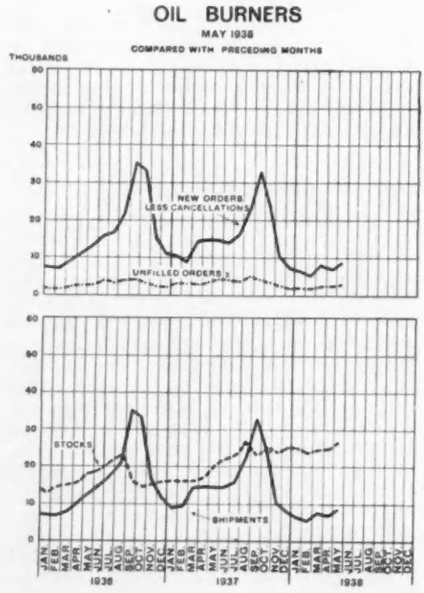
The heavy, industrial fuel oils are still somewhat unsteady, although prices are unchanged. Tending to aid them is the current seasonally improved demand on the part of the railroads, in connection with the movement of wheat crops.

Apparently, he whole market now is marking time, pending more tangible effects of the authorized larger crude oil production during July, which has potentialities for adversely affecting not only the crude oil but also the refined oil markets.

It remains to be seen how the larger crude oil output will affect refinery runs and the inventories of crude and refined oils.

The industry in the past two months has materially reduced the previously excessive inventories of gasoline, and it also has brought crude stocks down to unusually low levels.

But higher production allowables now prevail, and less favorable statistical trends are indicated for coming weeks.



Figures on shipments of oil burners have continued to have unfavorable implications for fuel oil demand. They have been running lower in 1938 than in either 1937 or 1936, statistics of the Department of Commerce indicate.

Total shipments by manufacturers reporting to the department amounted to 8732 units in May, 1938, compared with 14,406 in May, 1937, and 12,356 in May, 1936.

For the first five months of the year, shipments totaled 35,793 burners in 1938, compared with 62,618 in 1937 and 46,553 in 1936.

Changes made in prices of crude and products

Price changes in the oil industry during the past week were confined mostly to the crude oil market, postings have been altered locally in several fields, down in some cases but up in others. However, some minor changes were made also in tank car prices of natural gasoline and of manufactured gasoline.

Stanolind Oil & Gas Company, effective July 8, lowered postings 25 cents a barrel on Elk Basin and Grass Creek light crudes, of Wyoming, making the new price $1.05 a barrel in each field. Subsequently, The Ohio Oil Company met the new prices through a similar reduction. The last previous change for the fields was a 12-cent advance January 28, 1937.

Effective July 11, Sun Oil Company reduced its crude price posting for Hardin field, Liberty County, Texas Gulf Coast, 5 cents a barrel, or to $1.15. It was explained that the reduction brought the company's price down in line with the prevailing price of other purchasers.

Standard Oil Company of California has increased its prices for crude oil in the Greeley and Canal fields of the San Joaquin Valley, California. The new prices range from 97 cents a barrel for the lower gravity oil up to $1.68 for 48 gravity and above, and are 7 cents a barrel higher than previously for 27-29.9 gravity oil and 4 cents higher for 48 and above. The company explained that the increase in prices resulted from the recent deep zone development which has given lighter gravity oil.

In most instances, prices of refined products late last week were the same as one week previously.

Natural Gasoline

Natural gasoline, grade 26-70, was priced generally in the Mid-Continent markets f.o.b. refineries at 2⅝ cents a gallon, and sales were reported at 2½ cents f.o.b. Breckenridge, Texas.

Gasoline at Refineries

U. S. motor gasoline ranged in the Oklahoma market last week about as follows: 62 octane and below, 4¾ to 5 cents a gallon; 63 to 66 octane, 5 to

Gulf cuts Goldsmith pipe line purchases

Restoration of the Goldsmith field, Ector County, to a six-day production schedule has resulted in the Gulf Refining Company, pipe line division, reducing its runs from 13,085 barrels to 10,000 barrels daily effective July 8. The company is the largest purchaser in the area, and in order to reduce its runs to within pipe line capacity and crude demand cut all connections 23.6 percent below the base allowable authorized by the Railroad Commission for the July period.

Goldsmith field was assigned a base allowable of 20,684 barrels daily from 488 wells on the July 1 schedule. Gulf Oil Corporation is the largest producer, having 107 wells with a base allowable of 5429 barrels daily. The latter's wells were placed on the reduced production allowable.

Unsuccessful efforts were made to induce other West Texas crude purchasers to absorb the surplus oil turned back by Gulf Refining Company, pipe line division.

Independents in the Goldsmith field will enter a plea at the railroad commission's state-wide hearing July 18 for an adjustment of the Goldsmith situation, according to E. A. Landreth, head of Landreth Production Corporation.

CRUDE OIL PRICES

Complete tables of prices paid for crude oil at the well in principal fields were shown on pages 50 and 51 of the July 4 issue. The complete schedule appears only in the first issue of each month.

5⅛ cents; 67 to 69 octane, 5¼ to 5½ cents; 70 to 72 octane, 5½ to 5¾ cents.

Corresponding prices in the Chicago markets were 4⅝ to 5 cents, 4¾ to 5⅛ cents, 5 to 5⅜ cents, and 5⅛ to 5⅝ cents.

In East Texas the most common gasoline, 60-62, 400 end point, was priced generally from 4⅝ to 4¾ cents a gallon.

Kerosene prices f.o.b. Oklahoma refineries ranged from 4¼ to 4⅜ cents a gallon for the 41-43 water white grade, and from 4½ to 4⅝ cents for the 43-44 water white grade; and corresponding prices in the Chicago market were 4 to 4¼ cents and 4⅛ to 4½ cents.

Fuel Oil

Fuel oil prices were generally the same as in the previous week. In the Chicago market range oil was priced from 3¾ to 3⅞ cents a gallon. The No. 1 white oil was priced from 3⅝ to 3⅞ cents and No. 1 straw from 3⅜ to 3¾ cents. No. 2 straw was 3¼ to 3⅝ cents. No. 3 oil was 3 to 3⅜ cents. No. 5 oils were 65 to 75 cents for domestic and 55 to 65 cents for industrial sales. The No. 6 oil was quoted to the usual industrial customers at 35 to 50 cents a barrel.

Industry still retains good inventory position

The statistical situation of the industry has continued to improve, in consequence of the strict regulation of crude production and refinery runs in recent weeks, although the higher allowables lately put in effect are likely to result in less favorable figures in coming weeks.

Foreshadowing this possibility of impending less favorable statistics was the fact United States crude oil production jumped sharply in the week ended July 9, rising 237,700 barrels a day higher than in the previous week, as new, more liberal allowables were reflected. The output during the week averaged 3,296,250 barrels daily. That was 6.4 percent less than in the corresponding week last year, when output was, however, above economically desirable levels.

Runs to Stills Same

Despite the opening of wells to greater extent, refinery runs of crude oil remained the same in the week of July 9 as in the preceding week, averaging 3,095,000 barrels daily. That was 6.9 percent less than in the corresponding week last year.

Crude Stocks Decline

Figures on crude oil stocks, likewise, had not yet had time to be affected materially by the higher production, the storage having continued to furnish a part of the refinery requirements in the week ended July 2, latest period for which figures are available. During that week, however, production still was under the lower allowables of June, and approximately 1,800,000 barrels of crude came out of storage. Following that decline, the United States crude oil stocks totaled only 291,666,000 barrels, or 5.5 percent less than at the corresponding time last year. The crude stocks now are only a few thousand barrels above the 17-year low level reached in January, 1937.

Gasoline Storage Down

With refinery operations still moderate, gasoline production continued low enough in the week ended July 9 to allow the withdrawal of over 700,000 barrels from storage, which came down to 79,893,000 barrels. That new total was only 7.9 percent higher than the storage on the comparable date last year, and indicated that gratifying progress has been made in reducing formerly burdensome stocks. However, gasoline demand does not justify even the present levels of storage, being only about the same this year as last year.

Fuel Oil Situation

While the gasoline stocks have been reduced, fuel oil inventories remain far out of line with market requirements. They increased more than 1,500,000 barrels in the week ended July 9, rising to 140,587,000 barrels. They then were 35.8 percent larger than one year previously, whereas fuel oil demand lately has been under last year's levels.

Brookings Institution Report Points Out No One Concern Controls Oil Prices

Technological developments in the oil industry have worked to the benefit of the consumer and, with the great mass of small independent operators, have tended to keep competition alive, it is held by the Brookings Institution in a report on industrial price policies and economic progress made public July 14, in which it is pointed out no one concern controls oil prices today.

Tracing the rise and fall of Standard Oil Company, whose hold on the prices of refined products was repeatedly broken by "independent" operators, the Institution found that "from a situation in which the oil industry appears to be under the almost absolute control, first of one great company and then of a tightly knit group of commonly owned companies, the ownership pattern of the industry had by the mid or latter 20's been transformed into one of exceedingly great complexity and variety."

"Today," the report declared, "there is at the one extreme among oil companies the second largest of the country's industrial corporations, Standard Oil Company (New Jersey), with a capitalization of about two billion dollars. But far from this meaning that there is only one big company, there are within the Standard Oil group alone six other major companies (four of them integrated very much like the New Jersey company). Beyond this there are 12 independent majors (including among these the Royal Dutch Shell organization) these 18 other companies having together a capitalization of close to three and a half times that of the New Jersey company.

"The existence of this number of separate concerns, all of them large, rep-

Trends of United States Production and Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	Gas & Fuel Oil Stocks (Barrels)
June 26, 1937	3,529,600	3,235,000	307,679,000	75,427,000	100,395,000
July 31	3,591,900	3,425,000	308,250,000	70,872,000	108,209,000
August 29	*3,731,450	3,425,000	309,506,000	66,997,000	112,111,000
September 25	3,666,300	*3,455,000	307,974,000	65,620,000	116,472,000
October 2	3,647,450	3,400,000	309,036,000	65,266,000	117,076,000
October 30	3,602,950	3,345,000	307,140,000	66,836,000	121,070,000
November 27	3,425,800	3,325,000	304,156,000	68,544,000	121,616,000
December 25	3,492,600	3,245,000	303,294,000	74,437,000	118,659,000
January 1, 1938	3,436,600	3,320,000	303,468,000	77,291,000	118,660,000
January 29	3,357,650	3,170,000	304,286,000	84,844,000	118,793,000
February 26	3,322,800	3,170,000	305,167,000	90,719,000	120,958,000
March 19	3,322,550	3,080,000	306,380,000	*93,192,000	122,067,000
March 26	3,405,600	3,080,000	307,557,000	92,858,000	122,979,000
April 30	3,3 6 150	3,215,000	307,147,000	91,339,000	128,270,000
May 28	3,098,650	3,150,000	301,583,000	87,946,000	134,315,000
June 25, 1938	3,083,900	3,025,000	293,463,000	82,412,000	137,801,000
July 2, 1938	3,058,550	3,095,000	291,666,000	80,634,000	138,903,000
July 9, 1938	3,296,250	3,095,000	.....	79,893,000	140,587,000
July 10, 1937	3,520,750	3,325,000	†308,744,000	73,976,000	103,537,000
Change in past year	—6.4%	—6.9%	—5.5%	+7.9%	+35.8%

* All time peak. † Stocks, July 3, 1937.

resenting several different types of organization and antecedents, would in itself remove the possibility of any all-embracing leadership by a single company. But the possibility that the whole indutry might get together on any basis, other than by government sanction, has been made very remote indeed, owing to the fact that in every branch of the industry, except possibly in transportation, there are great numbers of non-integrated independents, some of which, by the standards of most industries, would be considered large, many others comparatively small."

The way in which the prices of oil in general, and gasoline in particular, are now determined, reflects not only this corporate organization of the industry but also the system of proration of oil production by state governments, the report asserted.

"Conservation of oil—and particularly the adoption of techniques which increase aggregate recovery," it said in this connection, "should mean lower prices in the long run than would otherwise exist. The early effect of slow withdrawal, however, has been to decrease the amount of oil immediately available from many fields. Thus proration by state governments has tended to put a floor under oil prices, which has given them a certain inherent stability and strength entirely independent of the degree of competition existing or not existing in the oil industry, or of what the oil men as individuals or in groups do or do not do."

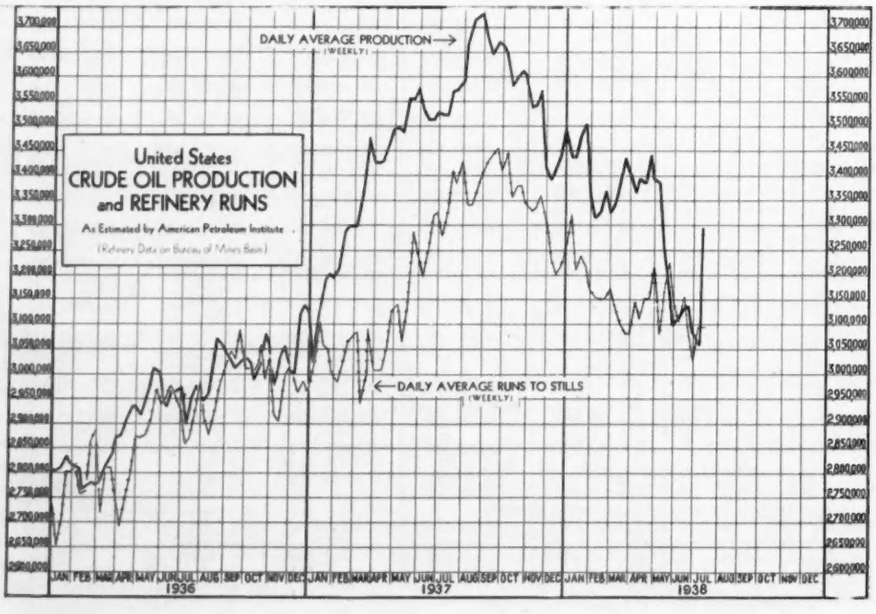
In addition to the traditional type of struggle for a given market among the firms which have long been doing business there, and the invasion from without by companies which, though new in the particular market, had long been operating along conventional lines elsewhere, the oil industry has in it a type of management which consciously subscribes to the philosophy of striving vigorously for the lowest possible costs, and then extending its field of operations by the lowering of prices, at least to whatever point may be necessary to market its expanding volume of output, the institution found.

"Competition among the greater oil companies, ranging from the highly constructive to what some might regard as cut-throat, has for some years been the most arresting aspect of the oil picture," it was commented. "Prices have at times been much depressed; and some hold that it is only proration which keeps the competition among the giants and near-giants from forcing prices to a point so low that the most efficient company could no more than break even. Others, however, believe that if the giants were left entirely alone, they would compose their differences; and that it is really the presence of a great mass of small companies in many branches of the industry which keeps competition dynamic.

"Without attempting to pass on this question, it seems clear that the small companies play an important role. In spite of the huge size of the organizations under which the greater part of the oil industry has been carried on—especially in stages beyond crude production — even since the 1870's, there are many places in the oil industry where a comparatively small concern can, given good management, render some physical or commercial service just as efficiently as could a very large company.

"Amidst all these forces it will be seen how far any one corporation or group of firms is from having any real control over gasoline prices. * * * To be sure, efforts at price maintenance have not been lacking. The recent Madison case, in which a jury in a federal district court found a group of oil men guilty of conspiring to fix prices, grew out of developments which took place in 1934 and 1935. At that time the price of gas was perhaps too low. At any rate, the independent refiners who had to buy at current crude oil prices were threatened with annihilation. So a group of major oil companies went into the market and bought gasoline with at least a two-fold purpose, first, of aiding the distressed refiners and thus removing a possible cause for public intervention in the oil industry, and second, of relieving the pressure from the distressed oil in those communities in which it was seeking a market. At the same time, however, they accomplished a third and much more sweeping result. For the systematic purchase, on other than a competitive basis, of even a small quantity of gasoline which might otherwise have sought the extremely small spot market had a marked effect on the price quotations for spot gasoline, and therefore—since this was the base upon which most gasoline contracts were predicated—on all gasoline prices. In consequence, there was an outstanding rise in the wholesale price of gasoline. The price remained up, to the substantial profit of the oil companies, for six or seven months. Then the Department of Justice brought suit. Prices dropped sharply but soon moved up again in response to general market forces.

"There is reason to believe that as early as 1931, some men in the oil industry were working towards the objective which, for several months beginning in 1935, actually was attained; and that attempts were also made in 1932, 1934, and possibly also in 1933. Owing, however, to unfavorable circumstances, none of these earlier attempts succeeded for any length of time—even when the government, under NRA, was an active partner. So it remains true that, notwithstanding wide and in some measure successful efforts at price control, the oil industry has for some time now been overwhelmingly competitive."



Bureau reports May crude output decline

A precipitous drop in oil production brought daily average output in May to 3,183,000 barrels, the lowest since January, 1937, the decline of 240,000 barrels from the April average reflecting the lower state allowables and efforts of the industry to reduce crude inventories, it is disclosed by the monthly report of the Bureau of Mines.

The average for the month was 354,800 barrels under May, 1937, and 529,600 barrels under the 1937 high of 3,712,600 barrels, recorded last August.

Total production for the month was placed by the bureau at 98,674,000 barrels compared with 102,702,000 barrels in April and 110,911,000 barrels in May, 1937, bringing the total for the first five months of the year—508,569,000 barrels—to nearly 6,000,000 barrels under the 514,354,000 barrels recorded in the corresponding period last year.

While the producing branch of the industry is making progress in straightening out its situation, the report commented, the refining branch has not done so well, the relatively small decrease in gasoline stocks and a further large increase in fuel oil stocks indicating that runs were higher than necessary.

Production in Texas declined by 134,000 barrels daily, while Oklahoma showed a decrease of 41,000 barrels, California 33,000 barrels, Kansas 17,000 barrels, Arkansas 11,000 barrels and New Mexico 4,000 barrels, while only minor changes occurred in other states, it was said.

Reduced production resulted in a

sharp decline of 8,100,000 barrels in stocks of refinable domestic crude, it was shown. Exports, at 7,800,000 barrels of crude, set a new record and were greater than anticipated. Daily average crude runs to stills were 3,201,000 barrels, an increase of 12,000 barrels as compared with April.

The yield of gasoline from crude was 44.2 percent for May compared with 43.6 percent for April, it was reported. The indicated domestic demand for motor fuel was 44,911,000 barrels, a decrease of about 600,000 barrels compared with May, 1937. However, it was pointed out, exports of motor fuel were 4,576,000 barrels, an increase of about 1,300,000 barrels over last year, so that total demand showed an increase of about 1.5 percent. A decrease of 1,912,000 barrels in stocks of finished and unfinished gasoline reduced the total of those stocks to 88,147,000 barrels at the end of May; this decrease was greater than a year ago but indicated slow progress in the liquidation of excessive inventories.

Total demand for distillate fuel oils was slightly greater than last year, but the demand for residual fuel oils showed an approximate decrease of 3,600,000 barrels from May, 1937, the bureau stated. Stocks of all grades of fuel oils increased about 5,300,000 barrels in May, compared with an increase of 3,400,000 barrels a year ago.

According to the data of the Bureau of Labor Statistics, the price index for petroleum products in May was 56.4, compared with 57.5 in April and 60.9 in May, 1937.

Crude Production

Increase of 29,000 barrels still leaves United States output below Bureau of Mines recommendations

United States crude oil production during the past week registered a slight increase, when it averaged 3,338,025 barrels daily, or 29,000 barrels a day more than in the previous week. This was 60,075 barrels under the average daily production recommended for July by the Bureau of Mines.

The increase in production last week resulted from gains in Texas, California, Louisiana and Kansas, which greatly outweighed a small decline in Oklahoma.

Texas last week averaged 1,379,500 barrels daily, which was 6700 barrels more than in the previous week. This was 19,200 barrels more than the Bureau of Mines recommendation and 20,308 barrels more than the state allowable.

California output increased 5700 barrels to 670,200 barrels a day, and was 27,900 barrels more than the federal allocation and 50,300 barrels more than the recommendation of the Central Committee of California Oil Producers.

Louisiana showed an increase of 3625 barrels daily over the previous week, having averaged 266,375 barrels a day. This was 5775 barrels more than the Bureau of Mines estimate, and 16,650 barrels a day more than the allowable prescribed by the state.

Kansas likewise increased its production by 1775 barrels to 143,675 barrels daily, remaining under the Bureau of Mines estimate by 28,625 barrels and under the state allowable by 14,476 barrels daily.

Oklahoma showed a small decline of 775 barrels a day, averaging 442,475 barrels daily, which was 75,925 barrels less than the estimated demand and 14,476 barrels more than the state allowable.

St. Elmo, Ill.—Allied Oil Corporation of Illinois, subsidiary of a New York company carrying the same name, has announced plans for a 3000-barrel refinery to be constructed here immediately. It will be on a 30-acre tract formerly occupied by the Chicago and Eastern Illinois railroad roundhouse.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in July)	State Allowable in July	BARRELS DAILY FOR WEEK ENDED July 16	July 9
TEXAS—				
Texas Panhandle	.....	.....	63,700	74,300
North Texas	.....	.....	80,200	81,300
West Central Texas	.....	.....	30,100	38,700
West Texas	.....	.....	215,300	207,400
East Central Texas	.....	.....	99,700	103,500
East Texas Field	.....	.....	436,600	405,600
South Texas	.....	.....	241,200	248,700
Texas Gulf Coast	.....	.....	212,700	213,600
Total Texas	1,360,300	1,359,192†	1,379,500	1,372,800
CALIFORNIA—				
Long Beach	.....	.....	59,600	59,500
Santa Fe Springs	.....	.....	33,500	34,400
Huntington Beach	.....	.....	33,700	34,700
Dominguez	.....	.....	24,000	24,300
Ventura Avenue	.....	.....	33,900	35,500
Midway-Sunset	.....	.....	70,300	41,800
Kettleman Hills	.....	.....	65,400	68,000
Wilmington	.....	.....	99,700	94,500
Others	.....	.....	250,100	271,800
Total California	642,300	620,000*	670,200	664,500
OKLAHOMA—				
Oklahoma City	.....	.....	105,025	113,000
Seminole Area	.....	.....	91,350	91,825
Fitts	.....	.....	36,925	38,700
Others	.....	.....	209,175	199,725
Total Oklahoma	518,400	428,000	442,475	443,250
LOUISIANA—				
North Louisiana	.....	.....	80,675	79,250
South Louisiana	.....	.....	185,700	183,500
Total Louisiana	260,600	249,725	266,375	262,750

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in July)	State Allowable in July	BARRELS DAILY FOR WEEK ENDED July 16	July 9
KANSAS—				
Burrton-Haven	.....	.....	9,625	10,220
Russell County	.....	.....	22,425	7,550
Silica	.....	.....	10,950	23,700
Others	.....	.....	100,675	100,430
Total Kansas	172,300	165,000	143,675	141,900
NEW MEXICO	112,900	101,600	102,100	99,500
MICHIGAN	56,400	.....	53,800	55,400
ARKANSAS	51,000	.....	57,600	47,375
MOUNTAIN STATES—				
Wyoming	55,500	.....	58,600	59,600
Montana	13,500	.....	13,600	14,100
Colorado	5,200	.....	3,800	4,250
Total Mountain States	74,200	.....	76,000	77,950
EASTERN STATES—				
Pennsylvania Grade	.....	.....	77,800	77,100
Southern Illinois (New Pools)	.....	.....	30,150	29,200
Illinois-Indiana (Old Pools)	.....	.....	13,250	12,800
Others, Eastern	.....	.....	25,100	24,500
Total Eastern States	149,700	.....	146,300	143,600
Total United States	3,398,100	.....	3,338,025	3,309,025

* Recommendation of Central Committee of California Oil Producers.

† Daily average, considering Sunday shut-downs.

SOIL ANALYSIS SURVEYS FOUND OIL . . . .

In 4 out of 5 Wildcat Wells

THE PUBLISHED RECORDS of wildcat completions during the two weeks period ending July 8, 1938, lists that wells drilled on subsurface maps made by the Smith System of Soil Analysis Surveys. These five wells represent widely scattered areas . . . several different types of oil traps and other dissimilar conditions which illustrate the wide and successful application of this method of obtaining geophysical information.

On this record our work is 80% successful. From time to time this percentage may vary and we do not claim to be able to always maintain this high average of successful surveys. We do, however, offer our service as one commercially valuable to all who prospect for oil.

The following is a complete list of all completed wells during that period where our service was used:

★ **PRODUCER:**

South Louisiana. After three dry holes had been drilled on locations made by others, this operator ordered a Smith Soil Analysis Survey. In the first well drilled on our location he topped the sand below 7,000 feet, making a good producer. The state of Louisiana gives this well a potential of 1,115 barrels per day through ¼-inch choke.

★ **PRODUCER:**

Texas, Stephens County. Flowing 200 barrels in 4 hours, this well opened up a nice pool in the Lake sand.

★ **SHOWING FOR A PRODUCER:**

Texas, Milam County. Finding a saturated lime at 1,808 feet operator prepares to set casing and test.

★ **SHOWING FOR A PRODUCER:**

Texas, Milam County. At 1,516 feet this operator is in a sand and believes he can complete a well at this depth.

★ **DRY:**

Texas, Navarro County. Dry and abandoned at 3,502 feet.

For cost estimates on surveying your leases and drilling blocks, write, wire or phone—no obligation. Descriptive literature sent upon request.

GEOLOGICAL
Scientific Service Co.

Robt. O. Smith, President

411 PETROLEUM BUILDING **FORT WORTH, TEXAS**

Houston Office: 703 Second National Bank Bldg.

WEEK'S DRILLING HIGHLIGHTS

Eastern Area

Two new fields were added to Illinois' growing list of oil areas, one in Wayne County and the other in Clay County. Both wells indicated large production.

The Birk City field, only McClosky sand producing area in Kentucky, was defined to the west.

Kansas

Indications of first oil production for Ford County, Western Kansas, came last week with a flow of oil along with water after acid treatment of the Mississippi lime. A new Lansing lime pool was indicated for Barton County, west of the West Ellinwood field. There were extensions for the Chase field, Rice County, and hope for one for the old Winfield field, Cowley County.

Oklahoma

Development in Oklahoma field brought five wildcat tests for the Greater Seminole area, which because of recent field extensions in the older pools is the foremost spot of development in the state. Second wells were started in two of the recent Wilcox sand fields, Meridian in Logan County, and the Kay County field, which has yet to establish official initial output. In the southern part of the state two wells which have reached the deep Oolitic lime have so far failed to respond on production.

Michigan

Event of the week in Michigan was a wildcat strike in Clare County which promises to open a drilling campaign of some proportions. The well, initial try of a group of local business men, made a flow of 216 barrels the second day.

East Texas

A second test has been started by Gulf Oil Corporation and Humble Oil & Refining Company in Gregg County east of the big field where a recent well uncovered gas which will be used in the current drilling.

North Texas

The Marble Falls member of the Bend lime series yielded a discovery in Throckmorton County that was rated good for 1000 barrels daily before the hole bridged.

South Texas

South Texas saw the extension of the Vicksburg pay 3000 feet at Alice, the discovery of a new sand lens in the Loma Novia zone that extended the Ezzell field ¾ mile southeast. Several minor extensions were made to shallow Duval County fields.

An Ordovician wildcat in northeastern Garza County is checking favorably with geological information on the area in reaching 6500 feet, and considerable significance is being attached to the test as it would open the eastern platform of the Permian Basin for deep production.

Louisiana

The second crude oil producer from the lower Marine horizon was added at Cotton Valley. The new well flowed 48 barrels in 3 hours, and is 3 miles from the other oil well.

A new field was added to Louisiana's Gulf Coast sector, by completion of a good wildcat producing well in Plaquemines Parish. A new shallow oil sand was opened at North Crowley, Acadia Parish. A wildcat in Calcasieu Parish looked promising.

California

It is proposed that development of the new deep Eocene area (now called East Coalinga) in Fresno County shall be orderly, but a dozen tests are in immediate prospect.

Rocky Mountains

An excellent gas well extended the Muskrat gas field, Fremont County, Wyoming, a mile to the west. A new oil horizon was found productive in the old Cody field, Park County, Wyoming. The well made 10 barrels of oil hourly from the Embar lime at 4800 feet.

Comparison of Permits Granted for New Wells

STATE	Week Ending July 16	Total this Mo.	Total this Year	Total this Date Last Year	1937 Year Total
Arkansas	4	27	139	116	240
California	22	64	669	846	1,584
Louisiana	24	90	724	663	1,227
Kansas	19	73	853	1,450	2,663
Michigan	11	35	407	532	958
Oklahoma	33	99	1,114	1,664	2,711
Texas	119	529	7,387	9,966	17,238
Total	232	917	11,293	15,237	26,621

Summary of Wells Completed in the United States
Week Ending July 16, 1938

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total, 1938	Total this Date, 1937
Alabama	....	....	....	....	.....	2	1
Arkansas	6	5	1	....	3,291	128	48
California	19	17	1	1	15,423	675	749
Colorado	....	....	....	....	.....	5	6
Florida	....	....	....	....	.....	....	.....
Georgia	....	....	....	....	.....	1	.....
Illinois	22	14	....	8	3,974	580	85
Indiana	15	6	2	7	145	70	70
Kansas	25	16	....	9	16,220	959	1,369
Kentucky	13	8	1	4	391	392	181
Louisiana	19	13	....	6	6,152	589	459
Michigan	17	13	....	4	2,490	454	477
Mississippi	1	....	1	....	.....	11	6
Montana	5	5	....	....	661	32	92
Nebraska	....	....	....	....	.....	1	.....
New Mexico	6	6	....	....	2,664	280	381
New York	12	....	1	11	.....	394	618
Ohio	14	3	4	7	16	504	784
Oklahoma	36	19	3	14	3,517	1,205	1,756
Pennsylvania	42	38	2	2	48	1,224	1,662
Tennessee	....	....	....	....	.....	2	.....
Texas	195	141	5	49	211,679	7,193	8,147
Utah	1	....	1	....	.....	2	.....
West Virginia	9	1	4	4	4	383	474
Wyoming	6	2	2	2	135	56	57
Total this week	463	307	28	128	266,810	15,142	17,422
Total last week	543	370	36	137	316,322	....	.....
Total this year	15,142	10,455	1,105	3,582	10,722,603	....	.....

California Fields

Dozen wells to drill immediately in new Fresno area.

Santa Maria active despite loss of market for heavy oil.

Los Angeles. — Eocene production area opened by Seaboard Oil Company et al with Gatchell 2, Section 18-20-16, Fresno County, is to be called East Coalinga (adjoining the area heretofore known as Coalinga Nose) and development promises to be orderly, although completion of the well immediately started a rush of offsets. Two projects already have started drilling and six more are in various stages of preparation, with possibility that a dozen will be underway within 30 days. Universal Consolidated Oil Company's Leavitt-Hintz 1, Section 12-20-15, was first to get started and logically will be first to reach producing depths around 6900 feet.

Kern County Wildcat Quits

Continental Oil Company's KCL E-1, NWc 17-30-26, north of Ten Section field, Kern County, has suspended after producing salt water from 8574 feet and again at 8230 feet after being plugged back. At Wasco, this company's KCL A-3 is drilling below 10,200 feet; KCL C-1, Section 26-27-24, is coring below 12,600 feet in hard shale, expecting to encounter something around 13,100 feet.

Superior Oil Company's Geissinger 2, Section 35-28-25, at Rio Bravo, had an initial yield of 2300 barrels of 39-gravity oil with a million feet of gas when completed at 11,463 feet. Flow was restricted by 23/64-inch choke. Last casing was 7⅝-inch at 11,323 feet, top of the Vedder. Superior Oil Company's Helbig 1, Section 1-29-25, on the east flank of the anticline, encountered fractured shale around 11,785 feet and a test is to be made. This company's Anderson 1, Section 35-28-25, recently completed for 6300 barrels of oil, is being recemented to correct a 17 percent cut. This hole was carried to 11,608 feet and has 7⅝-inch cemented at 11,385 feet.

No encouraging signs have been found in Richfield Oil Company's Wheeler Ridge KCL 1, Section 28-11-20, at Wheeler Ridge, which formation is being cored below 4780 feet in hard shale. Tests are being made in likely looking spots. The Texas Company's Pioneer Unit Plan 1, a deep test in Section 33-11-23, at Maricopa, lost circulation at 8000 feet with bottom around 8628 feet, but 16-inch was recemented and coring now is below 8700 feet. At McKittrick, Leyce-Sonne & Dunham's Pasadena 1, a test in Section 28-30-22, came in for 15 barrels daily when swabbed at 2710 feet but the operator is preparing to deepen.

Standard Oil Company has suspended operations in KCL 12-5, SWc Section 7-29-26, at Greeley, to await results in other tests. This project is midway between Rio Bravo and Greeley fields. Reports are current that a fault has been found that runs through Rio Bravo which is on a line with Greeley, and may be substantiated due to shale formation resembling a fault zone discovered in Superior Oil Company's Hebling 1 at Rio Bravo. KCL 12-5 stopped at 5459 feet.

Shell Oil Company's KCL 83-35, Section 35-26-25, between Famosa and McFarland, failed to encounter anything of importance in the Vedder zone with bottom at 9000 feet. Four miles west of McFarland, Tide Water Associated Oil Company has a wildcat below 7000 feet, which is expected to tap the Vedder shortly. This test is along the same trend as the Shell Oil Company undertaking.

Santa Maria Valley producers are facing the prospect of permitting their oil to remain in storage in the ground, or continuing to produce without obtaining an adequate outlet for their product. During the past week, this field has been yielding only 2100 barrels of oil per day, although it was recently given an allowable of approximately 19,000 barrels by the Central Committee of California Oil Producers.

The reason for this is a collapse in demand. Union Oil Company has practically ceased to produce in the field, let alone taking any other production. The Belgium market for this type of crude, which has high asphaltic content, has ended, for the present, and it is a question of just where the producers at Santa Maria Valley will find themselves within the next few weeks.

The lack of a market for this valley crude has solved for the time being the difficulties of voluntary oil curtailment. Some weeks ago, Union Oil Company announced that it would no longer purchase crude, or take any except its own, and that would amount to 5000 barrels daily. Immediately, talk was heard to the effect that independent interests would erect their own cracking plants, and four or five independent refinery representatives gave the matter serious consideration. Several small plants have entered the field, but evidently they are not capable of handling the amount of crude that may be produced under the quota set by the central committee. A mass meeting is expected to be held soon by independent interests to see what may be accomplished toward building a refinery.

In the meantime, relief for some oil being produced at Santa Maria Valley is expected soon as the first refinery known as the Five C, is now operating on the E. H. Moore lease north of the Betteravia sugar factory, where it is slated to handle 2000 barrels daily. Maguire refinery on Sunshine Oil Company's Dal Porto lease is expected to be completed for the first run within the next week, Sunshine to furnish the oil.

Drilling activity, however, continues fairly brisk in this important valley field. Union Oil Company is starting work on Vicente 4 as an offset to the company's Nicolai 1 and the company has landed liner in Vicente 3, offsetting Hansco Oil Company's A. & T. 1. Union will get busy on Mallory 2, which offsets California Lands' McDonald 1. E. H. Moore will make a production test this week in Union Sugar 10, northeast of Guadalupe, which offsets Union's Silva 1.

Believing that the federal government will ultimately establish its right to oil and gas properties on and adjacent to tidelands in this state, many individuals residing in Utah and in Los Angeles, have filed applications with Secretary of the Interior Harold L. Ickes for permission to develop the mineral resources of more than a half-dozen oil fields in the Los Angeles Basin. Thirty-one applications are now on file, according to a study just completed by United Land Owners' Association, Inc., just organized by companies and individual operators and royalty owners in California tideland fields. This group of permits take in Seal Beach, Huntington Beach, Newport Beach, and includes Venice, Hermosa and Summerland. Other permits take in Dominguez and Santa Fe Springs.

Republic Petroleum Company last week swabbed in Harbor 1 in the Long Beach Harbor pool for an initial yield of 5465 barrels of oil per day along with 2,000,000 cubic feet of gas from 4020 feet. Harbor 2, with bottom at 4040 feet, was also completed for 3800 barrels daily, 400 barrels coming from the Ranger Zone and 3400 barrels daily from the Upper Terminal. Due to shortage of storage, production tests were postponed.

Interesting developments may be forthcoming in the Wilmington townlot field, where Wilgate Oil Company is drilling a deep test. Situated at Flint and Anaheim Boulevard, this project is reportedly in oil showings and scouts state that many of the companies that failed to get a pay off in nearby wells from the Ranger zone may have a chance to make a profit from the Ford and Terminal zones. Wilgate Oil Company is expected to make a production test with bottom of the hole at 5700 feet.

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Huntington Beach—		
Texas, Pearce 3	50	4496
Long Beach—		
Hilldon, Dominguez 1	511	7786
Texas, Wilson Fee 1	52	4680
Torrance—		
MacDonald & Burns, Moore 7	600	3510
Silver Beach, No. 1	430	4996
Wilmington—		
General Petroleum, Blinn (LB) 3	208	3643
SP (LB) 10	1488	4050
Macson Oil, No. 0-55-1	750	3675
Universal Consolidated, Newport (LB) 4	603	4078
Yorba Linda—		
Millerand Petroleum, Miller 1	115	1735
J. Pearl Oil, Dobashi 1	120	1801
Kettleman North Dome—		
K. N. D. A. 67-20J	925	11,041
58-16Q	1850	8100
47-18Q	3286	8005
Lost Hills—		
Argo Petroleum, Farnsworth 1A	100	1335
Rio Bravo—		
Superior, Geisinger 2	1635	11,464
Ten Section—		
Shell, KCL B-58-20	2700	8212
Rio Vista—		
Texas, Midland Fee 1	¶24,443	4030
Devils Den—		
Amerada Petroleum, Beer 5	*	8298

*Failures; †Junked; ¶Million cu. ft. gas.

Oklahoma Fields

Start second tests in new Kay and Logan fields. Seminole area drawing additional wildcat tests.

Tulsa.—Second tests for two of Oklahoma's recent Wilcox sand strikes were announced last week. Tide Water Associated Oil Company will drill a west offset to the discovery well in Kay County, where Helmerich & Payne and Ohio Oil Company have yet to get initial test in School Land 1, SW SE SW 16-28-1w, although the well indicated flow of higher than 1000 barrels daily while running tubing last week.

Gulf Oil Corporation has location for the second test in the new Merician field, Logan County, where Sinclair Prairie Oil Company completed Crews 1, SEc NW 27-16-1e, which made 1018 barrels initial.

The Greater Seminole area, which leads the state in field activity, most of it edge wells around the old pools, drew five wildcat tests last week. Several are being drilled on acreage farmed out by major companies.

In the deep area between the old Fox and Milroy pools, Carter and Stephens counties, two wells continue testing after reaching depths from which the first producers are making oil. The area has five other wells drilling.

Rating of 1000 barrels initial output was indicated for the Kay County second Wilcox sand discovery of Helmerich & Payne and Ohio Oil Company, School Land 1, SW SE SW 16-28n-1w, when it flowed 460 barrels while running 2-inch tubing late last week. The flow came in 10 hours, after which the well was shut in while more tankage can be provided for an official potential test.

A west offset to the well is being started by Tide Water Associated Oil Company, School Land 1, SE SW SW 16-28n-1w. Owners of the discovery well will be forced to drill two offsets to keep pace with the 10-acre spacing program indicated for the field. Efforts are being made to get lease owners to agree upon a 20-acre spacing program.

A bottom-hole type pump is being installed at the Cleveland County Wilcox sand discovery of W. A. Delaney and associates, Burgher 1, SE SE SW 12-7n-2w, which has been making water along with oil since drilling into the pay zone late in May. Early in July it went dead, after which it was plugged back to 7642 feet from a previous total depth of 7672 feet, leaving but 2 feet in the Wilcox sand. It flowed 1087 barrels of oil in three days along with 2194 barrels of water. Failure to get a satisfactory completion in this well has delayed further testing in the new area.

Deepest of the northern Oklahoma wildcats, Superior Oil Company of California's McCully 1, C W½ NW NW NW 26-16n-4w, south of the Crescent pool, Logan County, was checking low when it found top of the Mississippi lime at 6042 feet. On some of the higher markers it had been more encouraging from a geological standpoint. It is drilling deeper to the Wilcox formation.

Drilling was resumed during the week in the Garfield County wildcat by Champlin Refining Company in Boehm 1, SWc NE 4-24n-8w, which had been shut down to clear titles. It is now below 2000 feet.

The Greater Seminole area, where most of the state's drilling is now centered, is drawing most of the wildcat development. Three tests were started last week in Pottawatomie County.

G. M. Piggot and associates will drill Good 1, C E½ NW SW 4-11n-15e, north of the North Earlsboro pool.

George L. Pace has location made for Riley 1, NE NE SE 2-9n-3e, for a Wilcox sand test.

East of the Maud pool, A. D. Spears has location for Vinson 1, SW NW SW 29-8n-5e.

In Seminole County, Burke-Greis Oil Company will drill Bivens 1, SW NW SW 28-10n-7e, on a Seismograph high. The test is scheduled for the Senora sand.

British-American Oil Producing Company will drill Markwell 1, SE NE NE 24-12n-4e, Lincoln County. It is between Meeker and the small Wilzetta pool.

Farther east in Okfuskee County, Amerada Petroleum Corporation and Stanolind Oil & Gas Company have a wildcat starting north of the Wetumka pool, Canard 1, NE NW SW 33-10n-10e.

Location has been made for a west offset to the discovery well of the Meridian pool, Logan County, by Gulf Oil Corporation, which will drill Henderson 1, SEc NW 27-16n-1e. The discovery well, completed by Sinclair Prairie Oil Company, Crews 1, SWc NE 27-16n-1e, has pipe line completed to loading rack. Acreage deals as well as holdings acquired previous to completion of the Wilcox sand producer assure further drilling.

The tenth producing well for the Ramsey pool, Payne County, should be completed shortly, as Mid-Continent Petroleum Corporation, operator of the community block, has set 7-inch casing at 4650 feet in Ramsey 4, SW SE NW 18-18n-2e. Markers above the second Wilcox oil source indicate that this well will find the producing formation at about the same level as its south offset. It is running slightly lower than the discovery well.

South of the field, E. H. Moore, Inc., and The Texas Company are below 4500 feet in Means 1, NW NE NW 19-18n-2e. Success of this test will give some indication of the final size of this field, first 1938 discovery in Oklahoma.

Drilling has started on the test of Denver Producing & Refining Company, 6 miles northwest of the field, Horton 1, NE NW NW 22-19n-1e. This test has backing of several concerns and is not considered a possible extension of the Ramsey field.

First test of the Oolitic lime was not successful by Gulf Oil Corporation in Johnson 1-A, C SE NE 27-2s-3w, Carter County, in the deep play between the old Fox and Milroy pools. Tubing is being pulled to drill deeper from 7786 feet, where it failed to respond on gas lift. Gas was put in for an hour, and only 18 barrels of oil recovered, along with a gas output estimated at 100,000 cubic feet.

In Harley 1, C NW NW 19-2s-3w, Carter County, Carter Oil Company also failed to get production after perforating between 7166 and 7184 feet. It made a small amount of salt water and a little oil by bailing. It is at a plugged-back depth of 7286 feet after drilling to 8204 feet. Several tests have been made between the two depths.

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Comanche County—		
Wilson & Hubbell, Jack Allen 1, sw ne ne ne 28-2n-10w	*	1023
Carter County—		
Gulf Oil Corp., Berry (McCrary) 3, se ne nw 5-1s-3w (pb 3020)	*	3600
Creek County—		
Tide Water, Samuel Richards 21, se nw ne nw sw 4-17n-7e (pb 2709)	42	2722
Okla. Gas Prod. Inc., S. S. Carman 1, nw sw nw 30-17n-8e	*	2755
Hughes County—		
Harrison et al, P. Cox 1, se se sw 16-9n-9e	*	520
Harrison et al, E. Cox 2, se ne nw ne nw 21-9n-9e	*	528
Harrison et al, E. Cox 3, sw se ne ne nw 21-9n-9e	¶75	512
Kiowa County—		
Fields & Nagle, Oster 3, sw se sw 27-7n-17w	*	998
Anderson-Prichard Corp., Johnson 1, nw ne se 10-7n-20w	*	1215
Phil Cornell, Parks 1, nw nw sw 29-7n-20w	*	1075
Lincoln County—		
Wilcox O. & G., Saylor 1, nw nw nw 14-14n-6e	47	2982
J. J. Doherty, M. Todd 1, sw sw nw 23-14n-6e (pb 3035)	*	3075
Muskogee County—		
Foltz, Rowsey 1, sw ne ne nw se 9-15n-18e	*	1043
Okfuskee County—		
W. A. Fleming, Reddick 2-A, sw ne ne se nw 7-10n-12e	¶3	973
Oklahoma County—		
I. T. I. O., Rodine 9, c w½ e½ sw sw se 24-11n-3w	417	2991
Hollenbeck et al, Harmon 1, ne ne sw se 15-12n-3w	132	6490
Okmulgee County—		
W. W. Granfield, Anderson 8, ne ne se 8-14n-15e	2	1184
Pawnee County—		
Henry McNamard, Kelso 1-A, ne ne sw 19-21n-8e	*	2390
Pontotoc County—		
Stanolind, Norris "A" 1, se ne se 26-2n-6e	125	4405
Amerada, Wooley 20, c e½ n½ sw se se 21-2n-7e (pb 2624)	150	2645
Sinclair Prairie, Vivian 3, nw sw nw 22-2n-7e (otd 3809)	20	3834
Lynch et al, Parker 1, sw sw se 17-4n-8e (pb 4490)	*	4532
Delaney, Starrett 2, ne sw ne 21-5n-5e (pb 2590)	400	2642
Factor, Kroger 3, ne nw se 25-5n-6e	¶12	1680
Pottawatomie County—		
C. W. James, Henderson 1, nw nw ne 4-5n-3e	*	4263
Phillips, Pappark 4, c s½ n½ se se se 16-7n-4e	*	3548
J. F. Smith, Brown 1-A, ne ne se 21-7n-4e	75	3195
Magnolia, J. A. Hilton 5, se nw se nw nw 22-7n-4e	90	3178
J. F. Smith, Tarter 1, ne sw sw 32-7n-5e (pb 4015)	80	4090
Hall & Briscoe, Coleman 1, sw nw nw 33-7n-5e (pb 4040)	941	4051
Seminole County—		
Troup & Moore, Sanders 1, nw se sw 27-6n-5e	115	2691
J. F. Smith, Millsap 1, sw se sw 23-7n-5e (pb 2970)	223	3116
Malernee, Flowers 1, se sw sw 29-7n-6e (pb 3030)	7	4723
Wood Oil, Born 1, nw se ne 2-8n-6e	204	4123
The Texas Co., E. E. Brook "B" 1, sw sw ne 25-8n-6e (otd 4127)	10	4137
Tillman County—		
I. T. I. O., Graham 2, sw nw se 1-3s-19w	437	3094

*Failures; †Junked; ¶Million cu. ft. gas.

Kansas Fields

Ford County wildcat 60 miles from production flows.
New Lansing lime field promised for Barton County.
Russell County may receive new Arbuckle lime pool.

Wichita.—Encouragement for oil production in virgin territory of Western Kansas came last week with a showing from the Mississippi lime in Ford County, where Sinclair Prairie Oil Company previously had drilled to 5930 feet, 300 feet below top of the Arbuckle lime. After acid treatment the well, Young 1, C SL NE 34-27-21w, began flowing oil, mud and water. The flow followed drilling of plug with casing set at 4886 feet and top of the Mississippi lime logged at 4890 feet.

A Lansing lime field was indicated for Barton County when Crown Petroleum Company got small natural recovery in Wolf 1, SE SW SE 16-19-12w, and made ready to treat with acid. There was another pool indicated in Russell County by Aylward Production Company, Solback 1, SE NE 21-14-14w, which filled 3100 feet with oil from Arbuckle lime, total depth 3142 feet. Russell County also had a showing for either a new pool or an extension of the Coralena pool by W. I. Southern, Inc., Letsch 1, NE SW SW 17-15-13w, where standard tools are being brought in to drill deeper from 3230 feet in the Arbuckle lime.

The Ford County test of Sinclair Prairie Oil Company is 60 miles west of nearest oil production, the Cunningham pool, Pratt and Kingman counties. This is one of the deepest tests ever drilled in Western Kansas. It was carried to 5930 feet, and for the past two months frequent tests have been made at levels up the hole. The well logged top of the Mississippi lime at 4890 feet and top of the Arbuckle lime at 5629 feet. Recently it was plugged back to 5025 feet and 7-inch casing set at 4886 feet. When plug was drilled last week there was a small showing. Then the acid, 9000 gallons, was introduced, after which the flow of oil, mud and water resulted.

With the flow the well showed for between 10 and 12 million feet of gas with a good pressure. Crude was gauged between 6 and 10 barrels per hour in addition to an estimated 20 barrels of salt water. This well ranks chiefly through its geologic position as the outstanding well of the week.

Trees Oil Company's Lewis 3, Section 28-31-4e, in the Lewis-Akron-Hittle area extends Arbuckle lime production more than ½-mile southwest. The well pumped 1099 barrels of oil and no water from lime above 3328 feet total depth. No acid was used. National Refining Company's Trustee 1, Section 8-27s-2e, southwest of Wichita in Sedgwick County looks like a pool opener in Viola lime. The wildcat drilled 3 feet into the pay from 3252 to 3255 feet and the hole started filling. Eight hundred feet of oil rose in the hole in 1¾ hours. Operators are running casing to test.

The new pool indicated for Russell County came with oil filling 3100 feet in the hole after Aylward Production Company drilled Solbach 1, SE NE 31-14-14w, to 3142 feet in the Arbuckle lime. After 6-inch casing has been landed, further testing will follow. The well is southeast of the Big Creek field, which produces from the Gorham sand, Lansing lime and Arbuckle lime.

East of the Coralena pool, Russell County, W. I. Southern, Inc., is rigging standard tools to drill deeper in Lutsch 1, NE SW SW 17-15-13w, which is at 3230 feet in the Arbuckle lime.

Showing to indicate a new Lansing lime field in Barton County came from a swabbing test by Crown Petroleum Company, Wolf 1, SE SW SE 36-19-12w, which resulted in recovery between 4 and 5 barrels per hour. The producing formation was topped at 3189 feet and drilled to 3249 feet. The oil tested 36.2 gravity. The showing was made natural and the hole was made ready for acid treatment. The test is a mile and a half northwest of the small West Ellinwood field.

First pumping tests in the recent Sumner County Wilcox sand discovery of S. A. Murphy and associates, Tate 1, SEc NW 32-21-2e, indicated a well good for 75 to 100 barrels. Recovery is from a sand body between 3722 and 3740 feet. When the Wilcox sand was first penetrated, swabbing indicated a higher recovery. The hole was drilled deeper and shot and swabbing recovery afterward was never equal to the 10 barrels an hour which was recorded after oil rose 2200 feet in the hole.

A showing from the Lansing lime in the Rice County wildcat of C. L. Carlock, Heinz 1, NW SE 8-18-10w, brought the decision to change to standard tools for further drilling and testing. This well is a mile south of the Stumps pool.

An extension for the Chase pool, Rice County, seemed assured upon completion by Shell Petroleum Corporation of Cramm 1, NE NW NW 15-19-9w, which swabbed 200 barrels in 5 hours from the Arbuckle lime, top 3240 feet, total depth 3251 feet. Oil rose 3100 feet in the hole prior to running the swab.

In the older area the Winfield field, Cowley County, had indications of an extension to the southeast after the test of B. B. Blair and associates had two flows by heads from the Bartlesville sand in Dunlop 1, SW NW 21-32-5e. The hole had 1000 barrels of oil standing with some gas showing. Bartlesville sand was topped at 2903 feet.

A showing of a week earlier for production from the Mississippi chat northeast of the Eastborough pool, Sedgwick County, did not prove out upon testing. National Refining Company ran casing in No. 1, SE SE NE 8-27-2e, after getting a show between 2984 and 2986 feet. It is being drilled deeper.

Stafford County drew two of the wildcat locations for the week. Magnolia Petroleum Company will drill Fischer 1, NW NE SW 36-21-13w, ¾ mile northwest of the Fischer pool. Harry G. Newman and associates have staked a location, 3 miles west of the Snider pool, Fisher 1, NEC NW 6-21-11w.

In Russell County George W. Hinkle will drill Kaufmann 1, SE SE NW 10-15-12w, midway between the Greenvale and Dubuque pools.

Two miles southeast of the Hoisington pool, Barton County, James A. Brouk and associates will drill Demel 1, NE NW 30-17-13w.

KANSAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Barton County—		
R. E. Hay, Feltes 1, se se ne 14-16s-12w	*	1875
Amer-Vernon Oil Co., Seyfert 1, nw sw ne 3-17s-13w	282	3398
Colonial, R. Lust 1, sw sw ne 19-17s-13w	*	3566
I. T. I. O., Sesseler 6, c s½ s½ sw¼ 24-20s-11w	2478	3256
Ellis County—		
Kerlyn, J. A. Rumsey 5, ne sw sw 23-11s-17w	3192	3419
Cities Service, Hall 1 "C," c e½ w½ ne¼ 35-11s-17w	*	3675
J. J. Muth, Renny 1, c n½ ne se 29-14s-18w	*	350
Ellsworth County—		
Cities Cervice, Rolf's 3, ne se ne 14-17s-9w (pb 3107)	25	3193
Greenwood County—		
Whittaker et al, Bressner 1, nw nw se 8-26s-13e (pb 1495)	14	1498
Lane County—		
Phillips, J. Kees 1, c se se 3-19s-30w	*	4911
McPherson County—		
Ohio, Decker 17, nw nw se 20-21s-1w	466	3325
Continental et al, Goering 8, ce½ e½ sw¼ 29-21s-1w (pb 3356)	323	3428
Pratt County—		
Derby, L. E. Wood 1, ne ne ne 36-22n-5e	724	3909
Rice County—		
Continental et al, J. A. Lewis "A" 1 nw nw nw 13-18s-8w	1946	3240
C. H. Weaver, Lansing 1, ne se ne 26-18s-8w	*	3302
Skelly, Vokland "B" 3, sw sw nw 5-18s-10w	2388	3201
E. B. Holland, F. Malone 1, ne sw ne 19-20s-9w (pb 3378)	163	3384
Sinclair Prairie, Thompson 5, sw ne nw 21-20s-10w (pb 3196)	160	3348
Russell County—		
Stanolind, C. A. Mermis "B" 18, sw nw ne 5-14s-15w	297	3084
Web-Son Oil & Roy., Baxter 1, nw nw se 4-15s-15w	*	3429
Stafford County—		
Stanolind, E. Martin 2, ne ne nw 14-24s-11w	346	3788
Stanolind et al, U. G. Ferris "B" 5 ne nw nw 23-24s-11w	1052	3823
Parker Drlg. et al, McComb 2, nw sw nw 24-24s-11w	2364	3809
Stanolind, Taylor 1-A, nw nw ne 33-25s-12w	*	4275
Stanolind, H. B. Hewitt 1, nw nw nw 34-25s-12w	*	4268

*Failures; †Junked; ¶Million cu. ft. gas.

Kansas field named

Wichita.—Because of two recent completions between the Ainsworth and South Ainsworth pools, Barton County, was responsible for including the whole area under the one name, Ainsworth, by the Kansas steering committee, of the Standing Committee on Oil Field Nomenclature.

Nunn field was the name chosen for the Finney County pool, where one well, Nunn 1, C SE NE 7-21-34w, has been completed by Atlantic Refining Company.

Recent Arbuckle lime producers completed in Stumps area, Rice County, resulted in giving this part of the development the name of Harbiger.

North Texas Development

Throckmorton wildcat makes oil from Marble Falls. K-M-A locations decline; many wells without connections.

Wichita Falls, Texas.—Deep lime prospecting in North Texas accounted for a new oil discovery in southwestern Throckmorton County on a block largely held by independents. The Marble Falls member of the Bend lime series yielded production when Jones, Stasney, Groover & Rose's D. L. Brockman 1, SEc Section 95, Comanche Indian Reservation, blew in at 4703-05 feet on July 10, flowing steady at an estimated rate of 800 to 1200 barrels daily. Due to the absence of tankage, production tests were for short period. The hole bridged July 13 after producing 32 barrels of oil in 30 minutes. This obstruction was drilled out and the hole carried to 4708 feet, where it failed to flow and a small amount of salt water was bailed from the bottom of the fluid column.

Source of this brackish water has not been determined, as the well was produced with 5-3/16-inch landed without cement at 4419 feet. Cavings from the open hole are believed to be responsible for the forming of the bridge. Owners plan to lower pipe and cement same before attempt to complete in the Marble Falls. The southwest quarter of Throckmorton County has been popular with wildcatters since the development of high-gravity oil production from the Canyon series along a southwest trend in northwestern Shackelford and northeastern Jones counties. White, Duncan and Humble Oil & Refining Company's Reynolds 1, 4 miles east of the Brockman discovery, and R. L. Crawford et al's Matthews 1, situated 2¾ miles southwest of the new producer, are slated to drill to the Marble Falls. The only deep dry hole in the general area is Humble Oil & Refining Company's Davis 1, located 3⅓ miles north by east. Shallow oil and gas production established in a few nearby pools has not proved profitable.

Union Producing Company's Corley-Ramsey 1, Section 100, J. F. Clark Survey, A-2202, Young County semi-wildcat 2½ miles southeast of Graham, responded to acid treatment of Caddo lime at 3877 feet with a flow of 40 barrels of oil per hour, and gas volume rated at 15,000,000 feet daily. Saturation at 3834-70 feet was treated with 5000 gallons of acid. This well is ½-mile southeast of United Gas Company (was A. R. Eppenauer et al's) Eddleman 1, which was completed as a prolific gas and distillate producer early last year in Marble Falls at 4243 feet.

Wilcox Oil & Gas Company's W. H. Portwood 1, southeastern Baylor County deep wildcat, was drilling in Mississipian lime at 5285 feet, and is slated to continue to the Ellenberger.

Sinclair Prairie Oil Company's J. M. Best 1, discovery producer of the Walnut Bend area, northeastern Cooke County, was restored to production last mid-week as result of the emptying of lease storage. Production is from Deese (Strawn) at 4887-4900 feet, rated at 880 barrels natural. Sinclair Refining Company, pipe line division, is operating an 11.6-mile 4-inch line from the well to a 6-car rack on the Santa Fe Railroad at Gainesville. The discovery company is starting S. H. Putman 1, located 1650 feet north by west of the producer, and is contracted to drill to 7000 feet.

Offsets await performance of Wichita deep discovery

Wichita Falls, Texas.—Large initial rating earned by Petroleum Producers Company and Continental Oil Company's State Asylum 1, southeastern Wichita County wildcat recently completed in the lower Pennsylvanian lime section, will not induce the owners of nearby leases to wage a drilling campaign until the production performance of this new deep pay for the district affords proof that development will be profitable.

This record-depth producer for North Texas flowed 330 barrels of oil in 2 hours through 7-inch casing after being shut in for several days following the use of 3000 gallons of acid injected under 1400 pounds pressure. The well flowed 90.2 barrels of oil on potential gauge July 11 through ½-inch choke on 2-inch tubing, and the rated gas flow dropped from 3,700,000 feet to 1,000,000 feet during this period. Tubing pressure declined from 150 to 30 pounds during this period, while the casing pressure increased from 450 to 560 pounds. Prior to acid treatment the well is credited with having only 65 feet of oil in the hole. Production is from the Bend series at 5079-5128 feet. The well is located near the southwest corner of Block 1, Cherokee County School Lands, 3 miles south of Wichita Falls. Continental Oil Company acquired one-half interest in the well and 2700 acres of the original block in return for deepening the hole from 4506 feet to the 6000-foot level, or commercial production.

Another acid treatment was slated to be given the Asylum producer late last week as production declined to 8½ barrels hourly average on a later 15-hour gauge. Receding pressures indicated that natural flow would not be sustained.

Hanlon-Buchanan Inc.'s Fassett-Tuttle 1-D, near southwest corner of Block 23, 3½ miles east of the above strike, checked 112 feet lower structurally in logging top of the K-M-A lime at 3218 feet, and was fishing drill pipe at 5349 feet.

Three outposts in the Panther deep pool, north central Archer County, were awaiting production tests in the lower Strawn after failing to make producers in the regular oil horizon. Mazda Oil Corporation's W. T. Finley 1, A. Nails Survey, 1 mile north of the Strawn discovery, landed 7-inch at 4290 feet, coring minor oil saturation in broken sand and shale at 4290-4303 feet. Ligon and L. T. Burns' A. P. Nichols 1, southeast outpost, has cemented 660 feet of liner after coring oil saturated sand at 4387-92 feet followed by saturated lime to 4400 feet. Both prospects registered minor oil shows with water in the 3800-3900-foot Strawn. L. T. Burns et al's Kate Ahrens 2, SEc Section 127, northwest outpost, logged saturated lime at 3931-62 feet, and has cemented 7-inch at 3932 feet.

Completed wells without pipe line connections and market outlet in the K-M-A deep area reached a new high the past week. This condition was a factor in the reduction of new locations to 13 during the period. The field is credited with 226 operations, including 45 unofficially completed wells awaiting transportation outlet to make proration potential gauge, and 66 tests that are in process of completion or else have reached the Strawn horizon. Field work falling within the latter two classifications indicates that more than 100 wells will need connections before the end of the month. Rotary rigs are in service on 34 additional projects drilling between casing points, and surface pipe has been landed at 15 sites. Derricks, rigs, locations and idle tests account for 66 operations.

Mid-week check on the K-M-A field

NORTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County—		
Adams O. & G. Co., Moer 1, sec 21.	110	4165
Cable Oil Co., Webb 14, lot 5.....	*	731
Gray & Thweatt, Ferguson 1, sec 2.	*	4082
Phillips-F. P. Hynes, Arthur 1, sec 3	*	5446
Young et al, Jones 1, sec 1840....	*	953
Clay County—		
Bowers et al, Shumake 1, blk 4....	25	1149
Riley & Talbot, Rice 1, blk 14.....	*	1400
Seaberry & Taylor, Culver 1, blk 42	*	1229
Cooke County—		
Mudge Oil Co., Johnson 26.....	40	1214
Thompson et al, Dangelmeyer 1...	*	1628
Trumter Oil Co., Stacey 7.....	35	751
Jack County—		
Burgess et al, Bowden 1, sec 2.....	*	645
Gilmore et al, Hanna 6, sec 3313...	*	567
Nelson Oil Synd., Eatherly 5.....	600	2801
Pruitt et al, Covington 4.....	9	387
Tillman et al, Hoefle 1.....	7	431
Wichita County (K-M-A)—		
D. H. Bolin-Jim Whittington, Waggoner Bros. 2, sec 21.....	480	3963
The Bonner Co., Hodges 2.....1176		3950
Continental, Waggoner Bros. 3-B-C, lor 13	560	3796
Deep Oil Dev. Co., Pace 3.....	775	3962
Fain-McGaha, Griffin 1-B, blk 2...2112		3803
Grace & Woods, Hodges 4.....	†	3775
Hanlon & Buchanan, Fassett-Tuttle 2	320	3976
King Oil Co.-Perkins-Cullum, Mangold 9, blk 39.....	936	3830
Peckham et al, Munger 3, blk 31...	960	3866
Ray et al, Waggoner Bros. 1, sec 8.1440		3769
Retsal Drl. Co., Seay 1.....	600	3857
Staley Oil Co., First Natl Co. 13, blk 44	360	3884
Wichita County—		
D. H. Bolin-Jim Whittington, Waggoner Bros. 6-A, sec 21.....	24	914
Cooper et al, Cunningham-Parker 2, sec 13	*	1545
Harrison et al, Union Central Life 1	*	310
Panhandle, Coleman 14, sec 23.....	14	857
Schwegler & Persky, Goetze 7.....	*	997
Worsham et al, Preston 1-A, sec 20 Preston 2-A, sec 20.....	10 *	941 960
Young County—		
Horn et al, Gregg 4.....	7	736
G. E. Kesterson, Jr., Finch 3, sec 38	*	730
Pemeta Oil Co., Jordan 8, sec 1903.	*	695
Strong et al, E. G. Williamson 1, sec 604 1800		3940
Swanson et al, Cheeves 1.....	*	1030
Underwood & Campbell, Campbell 31-C, sec 3401.....	*	905
Campbell 32-C, sec 3401	*	906
Campbell 33-C, sec 3401.....	*	997
Wooten et al, Drum 1.....	*	590

*Failures; †Junked; ¶Million cu. ft. gas.

reveals 584 completed wells, with a base allowable of 18,851 barrels daily, and 39 producers are without pipe line connections.

C. H. Featherston et al's Waggoner Bros. 1, near northwest corner BS&F Section 13, A-394, northwest outpost for the main field, is awaiting production test after logging sand and lime with minor saturation at 3757-71 feet and saturated lime at 3826-34 feet. Top of lime was called at 3725 feet.

Texas drilling permits total 119 during week

The Texas Railroad Commission last week approved permits for drilling 119 new wells in Texas, 27 more than were allowed the week before.

Three permits were approvd in the East Texas field in Gregg County, while seven locations were reported from the remainder of the East Central Texas area.

Operators in the Gulf Coast reported 39 new locations. Southwest Texas operators listed 17 permits.

Permits for drilling 26 new wells in West Texas were approved by the Commission, including 11 in Ector County. Four permits were reported from West Central Texas.

WEST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Andrews County (Emma)—		
Rhodes-Tompkins & Donnelly, E. Cowden-Sinco 1	1061	4220
Crane County (Waddell)—		
Gulf, Waddell 22	992	3513
Ector County (Foster)—		
Barnsdall, H. Foster 19	839	4220
Continental, J. L. Johnson 1-A	157	4395
Sinclair Prairie, Johnson 8	614	4245
T. & P. Coal & Oil Co., Foster 5	1267	4185
Ector County (Goldsmith)—		
Gulf, Goldsmith 110	444	4210
Goldsmith 112	1052	4275
Phillips-Pure, Cowden 34	3255	4152
Ector County (Harper)—		
Broderick & Calvert, T. P. Land Trust 3	2988	4160
Wentz et al, Parker 10-D	1824	4178
Ector County (Jordan)—		
Atlantic-Skell, University 1-C	1370	3650
Oil Well Drl. Co., Connell 3-A	199	3787
Ector County (Judkins)—		
Texas Co., Connell 22	479	3660
Gaines County (Wildcat)—		
Eastland Oil Co., Dunbar-Stanolind 1	•	4640
Howard County—		
Eastland Oil Co.-Ambassador Oil Corp., T. & P. Land Trust 1-B	940	2814
Illinois Oil Co., R. Lane 8	735	2818
Lockhart Pet. Corp., Heusinger 2	1451	2866
Moore Bros. Corp., Snyder 4-A	1088	2850
Jones County—		
Iron Mt. Oil Co., Sinclair Prairie, D. J. Herbst 1	•	4302
Humble, Riley Horton 1	367	2932
Pecos County (Pecos Valley)—		
E. M. Thomasson Prod. Co., H. J. Eaton 1	•	1820
Upton County (McCamey)—		
Basin Oil Properties, Baker-Gulf 11-B	1136	2353
British-American O. P. Co., Robbins 12	227	2325
T. P. Coal & Oil Co.-Texas Co., Lane 10-E	429	2277
Ward County—		
Gulf, E. W. Estes 97	243	2620
E. W. Estes 98	216	2610
T. P. Coal & Oil Co., James 25	447	2421
Winkler County (Emperor)—		
Emperor Oil Co., Halley 2-C	1027	2880
Emperor & S. J. Iverson, Cowden 3	1050	2868
Winkler County (Henderson)—		
W. K. Roy. Co., Walton-Humble 3-C	600	3060
Winkler County (Kermit)—		
Magnolia, Walton 164	1889	2949
Sinclair Prairie, Vaden 9-B	526	3049
Yoakum County (Bennett)—		
Honolulu Oil Corp. et al, Bennett 6-677	†	400
Yoakum County (Wasson)—		
Denver P. & R. Co., Whittenburg 10	906	5075
Shell, H. L. Lowe 1	706	5024

•Failures; †Junked; ¶Million cu. ft. gas.

West Texas Fields

Garza County Ordovician wildcat is checking favorably. Two Gaines County wildcats nearing decisive depths.

Midland.—The geological section logged by Gulf Oil Corporation's Swenson Ranch 1, projected Ordovician wildcat for northeastern Garza County, is credited with checking favorably with geophysical information on the area in progressing to the 6501-foot level. Considerable significance is attached to this test, which is located at C NW H&GN Section 25, Block 2, 11 miles north of Clairmont, as it is the first try for deep production in the upper region of the east platform of the Permian Basin.

Companies that participated in the aggressive lease buying program late last year and early this year in Garza, Kent and Crosby counties were guided by shooting results on the deep bedded lime section, and are closely observing the results of the Swenson Ranch test. Gulf Oil Corporation took option on a second block last February from the Swenson interests, with a deep test clause, in anticipation of the Ordovician justifying a second deep test. Majors have been systematically acquiring long term leases in Borden, Scurry and Mitchell counties for several years as protection against Ordovician production along the east platform of the basin.

Two wildcats in northeastern Gaines County are nearing decisive depths for production in the Permian. Perryman and Pure Oil Company's Doak 1, situated on the west flank of the Cedar Lake geophysical prospect, tested dry after running casing above nominal gas and oil shows at 4952-94 feet, and core at 5038-42 feet carried slight oil odor. Riddle and Warr's Brown 1, situated 8 miles northwest, was drilling hard lime at 5185 feet. Top of brown lime was called at 4400 feet, and first solid lime at 4980 feet, with an elevation of 3283 feet.

R. H. Gill et al's Dixon-Gulf 1, SE SE NE Section 611 and 2¾ miles northwest of the Bennett field, Yoakum County, registered a low structural position in drilling to 4740 feet. Top of brown lime was called at 4320 feet. No dry holes have been drilled within or near the Bennett area which promises to afford the highest crude yield per acre of any field in the upper basin.

Trend of production to the north of the Crockett pool, northwestern Crockett County shallow strike made this year, was partially defined when R. H. Henderson et al's University 1, one mile north of production failed to respond to nitro shot at 1561 feet and was deepened to flowing water at 1595 feet.

R. L. Ardrey-Cranfill Bros. et al's Tubb 1, southwest corner of PSL Section 20, Block B-32, 1¼-mile southeast outpost for the Sand Hills field, Crane County, is experiencing difficulty in mudding off gas and water flow at 2740 feet. This outpost encountered 10,000,000 feet of gas in the upper lime.

TEXAS PANHANDLE Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Gray County—		
Danciger, Morse 11-B	20	2658
Dorsyann Pet. Co., Bull 2	189	2991
S. & M. Oil Co., P. A. Worley 3	833	3237
Hutchinson County—		
Phillips, Haile 7	444	3106
Texas Co., Pond 13	450	3065
Wheeler County—		
Binkley et al, Fee 1	¶30	1995
Gillespie & Son, McCurtry 3	¶1½	2030

•Failures; †Junked; ¶Million cu. ft. gas.

Texas reports output of 37½ million during May

Texas produced 37,471,175 barrels of oil during the month of May, according to a report released last week by the Texas Railroad Commission. This was a daily average of 1,208,748 barrels which is 13,279 barrels less than the daily average for the preceding month.

There were 81,232 producing wells, including 32,657 flowing wells and 48,575 pumping wells. There were 1024 more wells producing in May than were producing in April.

The total monthly allowable was 37,820,550 barrels, an average of 1,220,018 barrels daily. The April allowable average was 146,453 barrels daily more than the May average.

During the month operators moved 36,976,444 barrels by pipe line; tank cars carried 68,417 barrels; there were 186,938 barrels shipped by truck; fuel absorbed 20,793 barrels; and 15,526 barrels were used for miscellaneous purposes.

An outstanding feature of the report was the fact that the daily average production per well was 14.88 barrels, nearly two barrels less than the average for April and 4.94 barrels per well less than the average for May, 1937.

Natural gasoline decline continues

Washington.—Natural gasoline production continued to decline in May but the daily average of 5,685,000 gallons, while 154,000 gallons below that of April, was 282,000 gallons above that of May, 1937, it was reported July 12 by the Bureau of Mines. The most notable declines were in the Appalachian, East Texas and Panhandle districts.

Total production for the month was 176,232,000 gallons against 175,182,000 gallons in April, the bureau announced.

Stocks at refineries and plants and terminals continued to increase, the former rising from 135,744,000 gallons to 142,968,000 gallons and the latter from 123,774,000 gallons to 132,048,000 gallons, the report showed.

East Texas Fields

Second start in East Texas field gas extension area. Deep Chapel Hill well making 72 barrels of distillate.

Kilgore, Texas.—The deep gas production, with distillate, uncovered by Humble Oil & Refining Company and Gulf Oil Corporation's Robertson 1, Gregg County wildcat and 3¼ miles east of the East Texas field, will be utilized in supply fuel for the partnership's second lower Trinity project. Rig has been set up to drill Porter Horton et al 1, H. G. Hudson Survey, 1⅝ miles southwest of the county's first producer below the Woodbine. Robertson 1 was given official proration gauge July 12, and tested 1.45 barrels of distillate on the third hour through ¼-inch tubing choke, with gas volume rated at 4,080,000 feet daily. Production is from Pettit zone which was tapped by gun-perforating pipe at 7244-86 feet. The hole was plugged back from 10,275 feet to 7909 feet.

Official gauge has also been given Hunt Oil Company's Bradley 1, deep strike for the Chapel Hill area, Smith County, and the distillate production will be purchased by Sun Pipe Line Company. This wildcat produced 72.67 barrels of 62 gravity distillate and 850,500 feet of gas on 24-hour test through ⅛-inch tubing choke. Pressure on tubing was 2900 pounds, and 3125 pounds on drill pipe, which was substituted for casing. Production is from upper section of the lower Glen Rose at 7528 feet. Both of these wildcat gas/distillate wells will greatly exceed their proration potential if operated on larger chokes, and the high pressure gas will later be utilized for fuel, flowing energy and repressuring operations in the East Texas field.

Humble Oil & Refining Company's Dailey & Taylor 1, southwest outpost for the Navarro Crossing pool, Houston County, has been completed as a gasser, rated at 24,100,000 feet daily, from Woodbine sand at 5827-94 feet.

A. H. Tarver et al's C. E. Herrod 1, Eli Davis Survey, Limestone County wildcat 2 miles northeast of Thornton, showed nominal oil saturation in broken sand and shale at 3630-34 feet, followed by dry sandy-shale to 3637 feet. The well failed to show on drill-stem test, and casing may be cemented in the Woodbine, which was topped at 3528 feet.

K. L. McHenry and E. L. Kurth's L. Henderson 1, Wm. White Survey, northeastern Angelina County wildcat, was coring Eagleford shale at 6450 feet. This geophysical prospect logged Austin chalk series at 6094-6436 feet, with an elevation of 205 feet. It is seeking production in the equivalent of the Woodbine horizon, and is on the south slope of the Sabine uplift. Location is ¾ mile west of Ewing.

EAST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Combined Oil Interests, Eaton 29 (99.88-ac)	4500	3733
Eaton 30 (99.88-ac)	4800	3752
British-American O. P. Co., Mayfield-Cooper 9 (38-ac)	2400	3624
Gulf, Keeling 12-A (53-ac)	4200	3786
Humble, Dennis 13 (73.15-ac)	7000	3759
Lide-Tayloe Oil Co., Young 11-A (40-ac)	1800	3762
McMillen Tr., Thrash 8 (13.4-ac)	5200	3771
Ohio, Mason 18 (103.86-ac)	2500	3715
Sun, Patterson 3 (154-ac)	*	3737
Tide Water Associated, Pinkston 30 (134-ac)	6300	3810
Kilgore Area—		
Atlantic, Morse 5 (10-ac)	†	3100
Flanagan et al, Walker 5 (91.3-ac)	3000	3572
Francis Oil Co., Scroggins 7 (50-ac)	2000	3645
Gulf, Longley 5 (20.7-ac)	4000	3636
Jesbob Oil Co., Still 5 (12.17-ac)	240	3527
Magnolia, Radford 41 (252-ac)	3600	3667
Shell, Bivens 20-A (113.4-ac)	8400	3664
Elder 44 (196.05-ac)	8500	3632
Holt 2 (68.84-ac)	240	3729
Schulman et al, Smith-Stanolind 1 (57-ac)	500	3713
Sinclair Prairie, King 62-A (366.7-ac)	7000	3587
Tide Water Associated, Lacy 16 (80-ac)	6200	3545
Longview Area—		
Atlantic, Fenton 4 (18.3-ac)	5000	3642
Gen'l American, Adams 25 (102.65-ac)	8500	3594
Adams 26 (102.65-ac)	8500	3619
O. L. Hickman Est., Moyers 5 (25.89-ac)	3500	3588
Lacy et al, Collins 1 (5/10-ac)	6000	3645
Magnolia, Free 33 (169.3-ac)	5600	3630
Southland Prod. Co.-United E&W Oil Co., O'Byrne-Humble 46-a (304-ac)	225	3671
Stanolind, Fenton 20-B (93.24-ac)	5400	3618
Stanolind-Tide Water, Akin 18 (80-ac)	8800	3634
Texas Co., Woods 17 (91½-ac)	3600	3568
Anderson County (Cayuga)—		
Tide Water & Seaboard, Goode 6 (1332.2-ac)	2500	4024
Franklin County (Talco)—		
Magnolia-Humble, O. S. Maxton 8 (326½-ac)	444	4312
Bowie County—		
King Oil Corp., N. Watts 1	*	4574
Cherokee County—		
J. G. Mayo et al, J. M. Travis 1	*	4558
Gregg County—		
Humble-Gulf, Robertson 1 114-ac)	¶5 & 26	10,275
Lamar County—		
Dahl Bros. & Barr, Lewis & McCuiston 1	*	1253
Navarro County—		
R. G. Dickson et al, A. H. Swink 1.	*	440
Topaz Oil Co., M. Mizell 1	*	2674
Smith County—		
Hunt Oil Co., S. H. Bradley 1 (100-ac)	¶10 & 240	7528
Cass County (Rodessa)—		
Red Iron Drlg. Co., Echols 1, Wm. R. Meyers sur	308	5975

*Failures; †Junked; ¶Million cu. ft. gas.

Locate two outside tests in Jefferson-Lodi area

Shreveport.—Locations were made last week for two outside tests in the Jefferson-Lodi area of Marion County, Texas, along the Rodessa Fault, by Arkansas Fuel Oil Company, which is drilling a test 1½ miles southwest of a Hill horizon wet gasser completed 2½ miles southwest of Jefferson production.

The outside test drilling is Johnson 1, Alexander Johnson Survey, which is drilling hard lime and shale at 4710 feet. Elevation is 217 feet, and on top of Blossom, was 181 feet lower than in Pitts 1, the Hill horizon gasser. On top of the Washita, Johnson 1 was even lower, topping Washita at sub-sea depth of 3025 feet compared to sub-sea depth of 2769 feet in Pitts 1.

One of Arkansas Fuel Oil Company's outside locations made last week is Walker 1, John Humphries Survey, 1200 feet from west line, 746 feet from east line, 602 feet from north line and 1669 feet from south line, and it is located 7000 feet west of Braden 1, Thomas Hansen Survey, a gas-distillate well completed in the early days of Marion County development and 7500 feet northeast of Hill 1, Thomas Gillespie Survey.

Phillips Petroleum Company is testing pipe preparatory to drilling plug and testing J. O. Jackson 1, John Hanks Survey, which may be Jefferson's first dry hole. Total depth is 6170 feet and 7-inch is set on bottom. Core recovery in the Henderson topped at 6035 feet, and Gloyd topped at 6057 feet, was 90 percent dense or tight; elevation is 298 feet. It is on the southwest flank of the Lodi nose. Heyser, Heard and Clardy's Henderson B-5 U. Ewing Survey, has been giving trouble by showing salt water when perforated from 6026 to 6032 feet. Total depth is 6040 feet.

Two new locations were made in Cass County, one in the William R. Meyers Survey and the other in the Bryant Holmes Survey. Five miles northwest of Cass County production, James E. McCabe has filed a contract with L. L. Harper naming the latter escrow agent for the assembly of a block of acreage around the Samuel Gregg Survey, for a 6200-foot test to spud by December 1.

The Texas Company's deep test at Bethany, Panola County, Claude Adams 1, Thomas Cox Survey, was drilling hard sand at 8887 feet.

Spacing hearing for Flag Lake brings disagreement

Ten-acre spacing for wells in the Flag Lake field, Henderson County, was advocated at a hearing last week before the Texas Railroad Commission. The Texas Company presented a program which was opposed by the Humble, the latter favoring 20-acre spacing.

Geological data submitted at the hearing indicated that the field would be very small and that it was producing from an unusually thin Woodbine sand not more than 8 feet in thickness at any point. Water which has been found at —2737 limits the field on the east and approaches near the fault which forms the western limit of the field.

Subsurface contours indicate that the field is unlikely to be extended further north or south than is indicated by wells which are producing now.

The operators recommended 100 feet of surface casing cemented 50 feet above the shoe and an oil string cemented 1000 feet above the shoe. Potentials of flowing wells would be taken through ½-inch choke 6 inches long over a period of 24 hours. Pumping well potentials would be taken through 2½-inch tubing at the rate of 20 strokes per minute.

The maximum gas-oil ratio recommended was 2000/1. Most wells in the field are now producing below that ratio. Operators requested straight acreage proration and said that there were only one or two tracts smaller than the 10-acre units which they recommended as a proration basis.

Southwest Texas Fields

Vicksburg sand extended 3000 feet at Alice. New sand lens and extensions in other areas.

Corpus Christi. — Although continuing to find extensions, Alice field, Jim Wells County, continues to be an unknown quantity from the Vicksburg sand standpoint. Newest completions indicate a tremendously steep dip off the top of the structure to the southeast, calculated by some as high as 6 to 8 feet to each 100 feet. Several new completions on the high point of the structure have been showing high gas/oil ratios, reported by some as virtually gas producers.

The pool, however, did get a boost with W. G. Coates' Stillwell 1, ½-mile southwest of production, which drilled to 5360 feet, set casing and was completing. Core records indicated sand section 5243-61 feet, electric formation logging device giving the top of the sand section at 5235 feet and continuing to 5261 feet. The cores are said to have carried considerable shale in the sand, although the survey showed good sand body. The well has been drilled tight, consequently definite information is rather lacking. The well is of great importance as it means considerable new drilling on small tracts.

About 4500 feet east of the field, Pan American Production Corporation was preparing to drill 3 new wells under its contract with Callaway and Matthews. The company bought the latter operators' Cook lease agreeing to drill three wells should the first be a producer. It was carried to 5500 feet, plugged back and completed through perforations at 5176-83 feet, flowing large volume of gas and small amount of high gravity distillate. Shut in, the well developed pressures of 2175 pounds on tubing and 2200 pounds on casing. Bottom-hole choke was installed and the well turned into the tanks. No gauge was available late in the week. It is producing from a Frio sand above the Vicksburg zone.

Magnolia Petroleum Company's Valadez prospect in the La Anima Sola Grant, southwest of Ben Bolt, was again showing a heavy gas pressure after cutting out drill pipe to 5573 feet. It is bottomed at 6390 feet where casing became stuck as a result of an attempted blow out.

Still farther southwest, Standard Oil Company of Texas' Dolores Garcia 1, in the Concepcion Grant, Duval County, was drilling below 4500 feet on a deep prospect. Following the same Vicksburg-Jackson trend, Humble Oil & Refining Company has spudded its second 7500-foot hole on the Kelsey Bass tract, being in the southeast corner of Jim Hogg County.

Heaving shale may prevent Union Producing Company's Minnie Brown 1, Agua Dulce, Nueces County, from being carried to the expected 12,000-foot level. It is in the Hockleyensis zone at 9615 feet, having topped that formation at 8922 feet. Drill pipe was pulled back into the 10-inch casing at 8007 feet awaiting orders.

Reaching contract depth of 7000 feet I. J. Allen is expected to set casing in Rooke 2 for a completion attempt of sand section at 5382-5440 feet, showing distillate, then oil and gas, then salt water, from top to bottom, respectively. The test is on the Woodsboro prospect in Refugio County and is the first wildcat in this county in several years to indicate a new pool.

Magnolia Petroleum Company failed in its attempt to develop a producing area on the West Ranch and West 2-A has been abandoned at 7217 feet. It had a sandy shale and sand section from 5069-96 feet, showing gas with oil and salt water at the bottom, but efforts to cut off water failed.

New sand lens extends Ezzell field southeast

Beeville.—A new sand lens in the Loma Novia series, providing a ¾-mile southeast extension to production, was evidenced in the Ezzell area as Holland and Smith set casing in H. M. Bonham et al 1, Tract 3008, Block 59. The Live Oak County wildcat is bottomed at 1841 feet, having passed through the regular sand with oil show at 1603-14 feet, then finding another sand at 1651-58 feet, which on sidewall samples showed saturation. Casing was set near bottom and completion was being effected through gun perforation. The lower sand is shaled out in the main field.

Shallow Duval fields are being extended

San Antonio.—Several pools in the Mirando sector were receiving extensions, while another new area was defined to the southwest by its first test since the completion of the discovery producer.

Richardson and Walker's Mew 1, NE NW SE Section 287, about ¾-mile southwest of the Fitzsimmons pool, topped the Chernoskey sand at 3555 feet, drilled in 11 feet and on a drill stem test, seat at 3470 feet, recovered 250 feet of oil cut mud with no water and 9 pounds pressure in 15 minutes. It was coring for the regular 4300-foot Pettus pay as the week closed.

Offsetting the discovery well, H. J. Porter's Fitzsimmons 2-A, twin well and opener of the shallower Chernoskey sand, flowed 137 barrels of fluid with some water and high gas/oil ratio after pipe was perforated at 3605-7 feet. It had been squeezed and would attempt another completion over the week-end.

Arkansas Fuel Oil Company's Cuellar Brothers 1, about 4000 feet southwest of the discovery well of the Tesoro pool (formerly DeSoto), found the Pettus sand low at 5303-39 feet, carrying water, and the test is near contract depth of 5500 feet, where it likely will be abandoned.

V. G. Schimmel's program of drilling outpost wells to proven fields, apparently is meeting with more success. His newest venture, Murphy 1, Survey 110, ½-mile northwest of the Labbe field, Duval County, was testing sand at 2793-97 feet in the Loma Novia zone. The test found the Government Wells at 2647 feet and the Loma Novia at 2761 feet.

Several more tests are being started in the recently discovered north extension to the new Casa Blanca field, also in Duval County. Creighton and Moore's R. S. Martin 1, SE SW Section 230, pumped 136.5 barrels of pipe line oil per day from oil sand 1201-7 feet, casing being landed at 1197 feet. This well proved the enlarged area.

Northeast Pearsall proves discouraging

San Antonio. — Northeast Pearsall prospect, Frio County, took a most discouraging appearance when a drill stem test recovered only fresh water after Thomson and Thomson perforated in the Navarro sand in San Antonio Joint Stock Land Bank 1. The well, which is located in Section 1 and in the northern portion of a huge block held by Humble Oil & Refining Company, was carried to 5686 feet then plugged back for test in the Navarro sand. It had shown sulphur water in the Edwards limestone at 5632-86 feet, and fresh water in the Navarro at 3722-32 feet. The well was awaiting orders, but may be abandoned.

Chittim anticline gained an important wildcat location in L. M. Lockhart's Asbrook 1, ne Section 83, five miles west of Quemado. The test is projected to the Glen Rose, and should be carried to fully 4000 feet. It is on a block of 11,000 acres on the Maverick-Kinney line at the northwest end of the Chittim anticline.

On Anchorage prospect, Atascosa County, Mason Altgelt et al finally completed a fishing job in P. Venagas 1, Garza Grant, and preparations were being made to complete the apparent discovery well of a new pool. It is on Serpentine at 2724-96 feet, showing oil.

Pumping about 35 percent water with 50 to 60 barrels of crude per day, Red Bank Oil Company will make further attempts to complete its discovery well of the Chreisman field of Burleson County. The well, completed in the 6200-foot Edwards limestone, will be carried several feet deeper into the formation, acidized again and put back on pump.

Shale and gas retard deep Samfordyce test

Mission.—Sloughing shale and high gas pressure was handicapping the drilling of the first Cockfield sand test for the Samfordyce field, Hidalgo County. Phillips Petroleum Company's R. Flores 1, Share 250, Porcion 39, was attempting to go ahead from 5780 feet. It was in the Hockleyensis at this level, having passed through high pressure sands in both the Vicksburg and Jackson formations.

Union Sulphur Company's projected Vicksburg test in the Mercedes field, Hidalgo County, was 8417 feet with 7-inch protection string cemented before drilling ahead. The well is American Rio Grande Land and Irrigation Company 11, expected to be carried to at least 9200 feet.

Shell Petroleum Corporation was re-

ported to be ready to stake a new location for a test to at least 10,000 feet in Willacy County. No details could be confirmed late in the week.

The La Reforma prospect was given a definite setback when salt water developed in several sections of the Vicksburg. Wheelock and Collins' F. B. Guerra 1-A, Santa Cruz Grant, Starr County, drilled to 7010 feet, perforated at 6410-20 feet, recovered 5000 feet of salt water in 42 minutes, plugged back, perforated again at 6351-58 feet, made another drill stem test, then cemented back to test a 5900-foot zone. The test at 5351-58 feet, lasting 48 minutes, built up 190 pounds pressure in 25 minutes, a head of fluid in 36 minutes and started spraying salt water, pressure dropping to 100 pounds.

SOUTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LAREDO DISTRICT		
Duval County—		
Bridwell Oil Co., Sutherland 9-B, Hoffman	61	2691
Cox & Hamon, Chellar-Hagen 2, Hoffman	120	2815
Crighton & Moore, Martin 1, Casa Blanca	137	1207
Davis, Hoffman 1, Hoffman	*	3005
Graf, Vaello 1, Driscoll	*	4010
Reynosa Oil Co., Rodriquez 1-B, Seven Sisters	525	2660
McMullen County—		
Alaska-Tex Oil Corp., Franklin 1, Poitevent sur	*	3031
Shumway & Burns, Shiner Ranch 1, H. A. Grist sur	*	2250
Webb County—		
Nellon & Wise, Bruni Estate 1, sur 835	*	2172
Zapata County—		
Kleiner & Hill, Gutierrez 13, Escobas	*	1270
Texas Co., Jennings 116, Escobas	43	1282
Jennings 117, Escobas	43	1282
SAN ANTONIO DISTRICT		
Bexar County—		
Baker-Freeman Oil Co., White 1, Houghton & Vickery sur	*	1434
Ball & DuBose, Miller 1, Christopher sur 55	4	1372
Johnston, Brown 1, Christopher sur 55	*	1200
Guadalupe County—		
J. F. Camp Production Co., Denman 4, Darst Creek	225	2503
Stewart & Nye, Malerhofer 1, R. M. Forbes sur	*	2365
Medina County—		
Ewing Oil Co., Riff 2, Dunlay	*	760
Gaston & Brown, Sanne 1, A. C. & H. sur 105	*	903
CORPUS CHRISTI DISTRICT		
Aransas County—		
Shasta Oil Co., Conn & Brown 1, McCampbell	750	7203
Jackson County—		
Magnolia Petroleum Co., Drushel 1, Cordella	125	2672
West Ranch 2-A, R. Musquiz Gr.	*	7217
Jim Wells County—		
Geo. Echols, Balzen 1, I&GN sur 142	*	5259
H. H. Howell, Lindsay & Reed 6, Alice	750	5342
Lindsay & Reed 8, Alice	750	5314
Lindsay & Reed 11, Alice	750	5312
Live Oak County—		
James Chew, Cartwright 1, Poitevent sur	*	6598
Nueces County—		
Magnolia Petroleum Co., S. Weil 1, Saxet	*	7407
Navarro Oil Co., Houser 2, S. Clara Driscoll	350	5120
Pan American Production Corp., Sagarino 5-B, Saxet	500	7400
Seaboard Oil Corp., of Delaware, James P. Luby 32, Luby	520	4375
John M. Luby 12, Luby	475	4376
Katherine Shaffer 9, Luby	450	5069
Stanolind Oil & Gas Co., Spessard 5, Luby	500	5062
Texas Co., Flynn 1, South Clara Driscoll	450	5329
Union Producing Co., Simmonds 2, Agua Dulce gr.	¶10	4862
Refugio County—		
Houston Oil Co. of Texas, Pratt-Hewitt-Rooke 48, Refugio	750	6227
Quintana Petroleum Corp., Heard 19, Tomoconnor	3500	5925
Tom O'Connor 68-A, Tomoconnor	3000	5930
Victoria County—		
Geo. H. Echols, Lander 2-B, Heyser	600	6050
H. L. Edwards Drilling Co., Robertson Est. 3, E. Telferner	*	5285
Seaport Oil Corp., Diener 3, Heyser	500	5599

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Gulf Coast

Fairbanks outpost to try production test again.

Clinton field extended slightly to the north.

Houston. — The Texas Gulf Coast is witnessing one of the quietest periods from a wildcat standpoint of any time in the past several years, and last week interest centered around the flanks of proven fields and new locations.

Approximately 7000 feet northeast of production at Fairbanks, Harris County, Union Producing Company's Goodykoontz 1, Wiley S. Powell Survey, again showed salt water on a production test, and cement has been squeezed through perforations for another try. Goodykoontz 1 was perforated from 7230 to 7233 feet with 15 shots, and flowed washwater, salt water and a show of oil through a 14/64-inch choke. The well made eight to 10 barrels of salt water then a slug of 37.4 gravity oil. Tubing pressure was 80 pounds and casing pressure was 300 pounds. The sand found in this extension well is at a lower level than other wells at Fairbanks.

In the Bammel area, Harris County, H. M. Harrell et al's Polley 1, C. G. McLean Survey, is making 100 barrels of oil daily and 40 barrels of salt water through a 3/16-inch choke. Tubing pressure was 225 pounds and casing pressure was 235 pounds. Polley 1 is the first oil producer for Bammel. Other wells completed in this area make gas and distillate. Polley 1 was completed at 6261 feet.

At Addicks, Harris County, H. H. Givens has derrick up for Mrs. F. K. Adoue 2. It is 5200 feet south and 200 feet west of the northeast corner of D. Middleton Survey, Abstract 535. The well will be drilled to 3000 feet or deeper, according to reports.

One and a half mile southwest of production at Clinton, Harris County, S. G. Harrison et al has made location for Edgar Lafferty Estate 1, 330 feet south and 330 feet east of the northwest corner of the J. E. Lafferty 800-acre tract.

In the Clinton field, Stanolind Oil & Gas Company completed Weber 1, approximately 1000 feet north of production for 114 barrels of pipe line oil daily through a quarter-inch choke at 3745 feet. Tubing pressure was 130 pounds and casing pressure was 675 pounds. Weber 1 was perforated with 30 shots from 3735 to 3745 feet.

Pierce Estate's Fee 4, D. Fenton, cored sand showing oil from 6615 to 6626 feet and seven-inch casing was set. Top of the broken formation was logged at 6589 feet.

North of Markham, Matagorda County, Ohio Oil Company made location for W. D. Cornelues 1, 380 feet west and 587 feet south of the northeast corner of P. C. Yarborough A-865.

At Katy gas field, Waller County, Stanolind Oil & Gas Company et al's Freeman 1, H. & T. C. Survey, Section 99, was coring in shale at 10,775 feet at the end of the week. The well is below the Wilcox formation.

Another gas well was completed by Albert Plummer at Spanish Camp, Wharton County. Sorrell 2, 660 feet northeast of Sorrell 1, S. F. Austin Survey, made wet gas and a large amount of distillate through a ⅛-inch choke at 3020 feet. Tubing pressure was 1450 pounds. Sorrell 2 was perforated with 12 shots from 3008 to 3020 feet. Plummer has made location for Corbett 1, 5151 feet west of Felmont Oil Company's Mitchell 1 in the R. Kuykendall Survey, Abstract 40. Humble Oil & Refining Company has made location for another core hole test in the area. Northington 1 is in the S. F. Austin No. 1. The operator's Duncan 1, core hole test is now drilling in shale at 7640 feet.

Another dry hole was reported for O. W. Killam at Ogburn, Harris County, when Dodd 1, W. C. R. R. No. 12, was abandoned at 7010 feet. Broken shows were logged from 6453 to 6637 feet and from 6657 to 6687 feet. But all contained a salty taste. The well was higher structurally than his other wells in the district.

Southwest of production at Manvel, Brazoria County, The Texas Company's Jones 1, H. T. & B. Survey No. 64, cored sand last week from 4044 to 4045 feet but failed to show evidence of oil. At the end of the week the well was down to 4141 feet in shale and was drilling ahead.

On the southern end of the Hastings field, Brazoria County, Stanolind Oil & Gas Company completed Moore C-7, R. A. McGee Survey, flowing 613 barrels of pipe line oil daily from 6080 feet.

A new wildcat location was made in the Rattlesnake Mound area last week by Neville et al. It being Houston Farms Development Company 1, 406 feet east of the east bank of Chocolate Bayou and

TEXAS GULF COAST Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Barbers Hill—		
Texas Gulf, McLean 5 (wo)	412	4716
Clinton—		
Stanolind, Weber 1	114	4493
Conroe—		
Hooper Oil & Refg. Co., Hooper 5	538	6115
Cotton Lake—		
J. R. Turnbull, Lawrence 2	148	6532
Dickinson—		
Atlantic, Jones 4	69	8151
Bennett, Palerimo 1	491	8696
Coast Pet. Corp., M. Stewart 9	608	8919
Stanolind, Damiani 5	724	8882
Fairbanks—		
Williams & Thompson, Geperlo 1	650	6843
Winsor Oil Co., Parker 2	640	6843
Friendswood—		
Humble, Beamer 12	567	6045
Hardin—		
Amerada, Lynott and Bauffam 1	423	7650
Arkansas Fuel, Green 2	562	7654
Smith & McDannald, Rives 1	508	7614
Hastings—		
Stanolind, Edwards 9	483	6084
Moore C-7	613	6080
Paul 27	551	5707
Humble—		
John Deering, CO&G 4	104	2752
Silsbee—		
Republic, Fee 10	225	7736
Spindletop—		
Unity Oil Co., Roche 3	360	3421
Thompsons—		
Gulf-Humble, Booth 13	112	3220
Tomball—		
Humble, Quilter A-9	220	5586
West Columbia—		
Mike Hogg, Fee 2	*	5467
Merrick Oil Co., Smith 2	596	5374

*Failures; †Junked; ¶Million cu. ft. gas.

midway between the north and south line of Perry and Austin Survey. The well is on a 3000-acre lease.

On the northwestern side of Eureka, Harris County, Tide Water Associated Oil Company was completing its first producer last week in L. Lackner 1, J. Reinerman Survey, 1000 feet west of Jack Frazier's Varner Realty Company 1. The well flowed an estimated 25 barrels per hour through a quarter-inch choke with no screen in the hole. Lackner 1 was drilled to 7800 feet in salt water sand after topping the sand at 7762 feet. It was plugged back and tested sands showing oil from 7712 to 7733 feet. A tubing pressure of 800 pounds and a casing pressure of 950 pounds were recorded. After screen is set the company will make a potential test.

On the northeast side of the Orange field, Orange County, and 463 feet northeast of Union Producing Company's Lutcher Moore 2, which discovered a new sand some time ago, General Oil Corporation is reported to be setting casing in Cow Bayou State 1 at 6021 feet in sand showing oil. It is not known which sand will be tested as one good sand was picked up at 4094 to 4121 feet. A drill stem test of this shallow sand showed 820 feet of 25 gravity pipe line oil in eight minutes.

Ryan-Andrews-Tillery have made location for Chesson 2 at Orange. It is 305 feet north from Chesson 1-A and 117 feet west of the center of roadway in W. Dyson Survey. Chesson 1-A was the discovery well for a new sand on the southwest flank of Orange.

The second location for the Jefferson Coast salt dome, recently discovered by Humble Oil & Refining Company, is the concern's State B-6. It is in the Gulf of Mexico, 330 feet southwest from the northeast line and 3320 feet southeast of the northwest line of tract 7, and 1980 feet northwest of State 1, which discovered salt.

At Clam Lake, Jefferson County, Shell Petroleum Corporation's second well, McFaddin 2, S. A. Pace Survey, was swabbing last week. Casing was perforated from 5548 to 5552 feet with 12 shots. A drill stem test showed mud and a slight show of oil. Two and half-inch tubing was hung at 5519 feet. The crew has swabbed down to 4000 feet and the hole was showing no oil or salt water. It was yielding only washwater.

Another well at McCroskey field, Matagorda County, has logged the oil sand.

Salt Dome Oil Corporation and Standard Oil Company of Texas cored a shallow sand at Cedar Point, Galveston Bay, Chambers County, last week and were coring ahead. State 1-94 logged sand showing oil from 4420 to 4440 feet. The hole is now bottomed at 5289 feet.

Shreveport, La.—Twenty-four drilling permits were issued last week by the Louisiana Conservation Commission, of which 13 were for North Louisiana, divided among the following parishes: Bossier 1, Caddo 3, Claiborne 1 (Lisbon), DeSoto 2, LaSalle 1, Red River 1, Sabine 4. The 11 in South Louisiana were in the following parishes: Acadia 2, Beauregard 1, Cameron 1, Evangeline 2, Jefferson Davis 1, Plaquemines 1, St. Martin 1, St. Mary 1, Vermilion 1.

South Louisiana

New field opened in Plaquemines Parish.
New shallow oil sand found at North Crowley.

Lake Charles.—Gulf Oil Corporation added another field in South Louisiana the past week when Grand Prairie Levee District 1-A, Section 6-20s-19e, Plaquemines Parish, came in flowing 21 barrels of wash water and oil per hour from Miocene sands at 6151 feet. The first 24 hours the discovery well made 375 barrels of 27 gravity oil through a ⅜-inch choke with a tubing pressure of 500 pounds and a casing pressure of 300 pounds. The new discovery well was drilled and cored to 6151 feet in sandy shale and shells showing oil. Nine and five-eights-inch casing was set at 6129 feet. An electrical logging device showed good resistivity and porosity from 6134 to 6138 feet and from 6142 to 6147 feet. Besides the deep sand the electrical logging device showed possible oil sands around 3940 feet.

Southeast of Lirette field, Terrebonne Parish, Fohs Oil Company will make another production test on State Bay Baptiste 1. The first test was not satisfactory so perforations are to be squeezed with cement from 11,172 to 11,178 feet and perforated again. The testing tool when opened for 6½ minutes showed pressures of 600 pounds. After closing the testing tool the well showed a pressure of 700 pounds. Upon pulling the testing tool it showed only mud and gas, no salt water. State Bay Baptiste 1 was drilled to 13,409 feet and is the deepest well in Louisiana and the second deepest in the world.

Humble Oil & Refining Company has been successful in opening a new shallow oil sand at North Crowley, Acadia Parish. Federal Land Bank 3, Section 34-8s-1e, came in flowing 19 barrels of pipe line oil per hour through 3/16-inch choke with a tubing pressure of 1000 pounds. Federal Land Bank 3 was completed after casing was perforated with nine shots from 7192 to 7198 feet. After perforating casing screen and liner was set. The new sand discovery was carried to 9143 feet and seven-inch casing was set at 7359 feet. Several squeeze jobs were made before completion.

Attracting considerable attention is Republic Production Company's Sabine Tram Company 1 at Deweyville, Section 25-8s-14w, Calcasieu Parish. At the end of the week the crew was conditioning mud after the wildcat attempted to blow out at 9540 feet. A gas sand was logged and the light mud was kicked up on the derrick floor After the drilling mud is weighted the hole will be cored deeper in search of the oil sand.

The first failure for the Creole field, Cameron Parish, is Superior Oil Company's Sells 1, Section 5-15s-8w. The failure is north of the discovery well and was drilled to 10,112 feet, where salt water was found.

Superior Oil Company is making another hole at Creole, which is out in the Gulf of Mexico. The operator's State 2 was drilled from vertical by a deviated hole and went to 6813 feet. The hole was plugged back and deviated in a different direction and the new hole will be called State 2-A. All drilling operations at Creole are being drilled from one platform.

Shell Petroleum Corporation recovered salt water on a drill stem test in Jeanerett Lumber Company 1, Section 14-14s-12e, at West Lake Verrett, St. Martin Parish, when bottomed at 9853 feet in sand showing oil. Top of the sand was encountered at 9840 feet. Top of the broken formation was encountered at 9839 feet. A 15-minute drill stem test made from 9841 to 9853 feet recovered 29 stands and one single of salt water.

At Lake Mongoulois, St. Martin Parish, The Texas Company was having considerable trouble with salt water in State 6, Section 10-10s-9e. After spudding the hole was carried to 800 feet and salt water sands were logged at 750 feet. Mud is being mixed to kill the flow.

In the Woodlawn area, Jefferson Davis Parish, Union Sulphur Company made location for Miller 1, 330 feet south and east of the NWc S½ NW 7-9s-5w. The company has abandoned Calcasieu National Bank 3, Section 1-9s-4w at 9260 feet. Drill stem was stuck at bottom and the crew was unable to fish the pipe out.

In Caillou Bay, Terrebonne Parish, The Texas Company is moving in a drilling barge for State Coon Point 1, 59 degrees north, 45 minutes west 14,400 feet from United States Coast & Geodetic monument at Coon Point on Derniere Isle, well being in 22s-14e.

Amerada Petroleum Corporation's St. Charles Land Company 2 at Bayou Des Allemands, St. Charles Parish, was drilling in shale at 7743 feet last week and is below the established producing horizon. At 6885 feet the well logged a few inches of sand which showed four percent saturation. The firm's State 4 is at 9317 feet in shale and is also below the producing sand. Humble Oil & Refining Company completed Wurszow 1 at Lirette, Terrebonne Parish, in a shallower sand. Casing was perforated from 8360 to 8370 feet and it came in making 750,000 cubic feet of gas daily. The other producing horizon at Lirette is 10,550 feet.

SOUTH LOUISIANA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Charenton—		
Pan American, Robichaux 4	26	1899
Creole—		
Superior, Sells 1	*10,085	
Jennings—		
Superior, Lecklet 13, dr to 8573 ft, pb & comp	389	7070
New Iberia—		
Texas Co., Duhe 7	925	5911
Lake Pelto—		
Texas Co., State 19	*	7004
Port Barre—		
Emerson Oil Co., Sabille 5	5	3475
Valentine—		
William Helis, Valentine Plantation 2	1050	7570
Villa Platte—		
Continental, Pitre 1	200	9054
Woodlawn—		
Union Sulphur, Calcasieu National Bank 3	*	9260

*Failures; †Junked; ¶Million cu. ft. gas.

North Louisiana Fields

Cotton Valley Lower Marine oil strike gets four offsets.

Shreveport edge well flowing 40 to 50 barrels per hour.

North Louisiana's deepest test is abandoned as dry hole.

Shreveport.—Four new locations had been made on the south side of the Cotton Valley deep field which last week added its second crude oil producer from the Lower Marine horizon, ½-mile south of nearest gas-distillate production in that horizon and 3 miles west and slightly south of the other oil well on the southeast flank of the structure.

The new well is Mid-States Oil Corporation's Welori Lumber Company 1, C NW NW 3-20n-10w, Webster Parish, completed in the "D" sand of the Lower Marine after perforating 7-inch casing, set on bottom at 8687 feet, at the "D" sand topped at 8502 feet; elevation was 247 feet.

The first 3 hours the well flowed at the rate of 48½ barrels per hour through ¼-inch tubing choke with tubing pressure 1350 pounds and casing pressure 1420 pounds, with a gas-oil ratio of 1125 to 1, and for the next 3 hours it flowed 19½ barrels per hour through ⅛-inch tubing choke with tubing pressure 1600 pounds and casing pressure 1700 pounds, and a gas oil ratio of 1175 to 1. On later tests the gas-oil ratio was reduced to 665 to 1.

An analysis of the oil from Welori 1, shows it is one degree higher in gravity than that from Stanolind Oil & Gas Company's Pardee Company 1, Section 36-21n-10w, completed in the Bodcaw "E" sand of the Lower Marine for the first oil well of Cotton Valley in the Lower Marine.

Following is an analysis of the crude from Welori Lumber Company 1: color, green brown; gravity, 44.5: 10 pour point; sulphur content, 0.11 percent; basic sediment and water 0.1 percent; gasoline (with an octane rating of 60.5 and 332 end point), 20.5 percent; kerosene of 46.7 gravity, 28.5 percent; gas-oil of 34.0 gravity, with 80 pour point, 49.5 percent; no residuum; loss, 1.5 percent. The lube in the gas-oil cut was 15 to 20 percent.

The new locations made on the south side of the field seeking oil down dip from the gas-distillate area were: Mid-States Oil Corporation's Welori Lumber Company 2, C NE NW 3-20n-10w; H. L. Hunt, J. B. Sandefur 1, C NE NE 4-20n-10w; Bodcaw Stewart B-1, C NW SW 34-21n-10w; and A. L. Coffee 1, C NW NE 36-21n-10w.

Magnolia Pipe Line Company started running oil last week from Stanolind Oil & Gas Company's Pardee 1, taking 300 barrels daily although the Louisiana Conservation Commission has given this well, the first of the two oil wells at Cotton Valley, a temporary allowable of 700 barrels daily. No allowable has been set for Welori Lumber Company 1. Until regulations governing oil wells in the Lower Marine at Cotton Valley are promulgated, an 80-acre spacing rule, the same as for the Lower Marine gas-distillate wells, classed as gas wells, is being followed.

Cotton Valley operators will meet in Shreveport July 26 to discuss recommendations to Conservation Commissioner William G. Rankin for rules. At a hearing last autumn when a 160-acre spacing rule for Lower Marine wells producing gas-distillate was asked by the three companies having the bulk of production, at least one of their representatives stated his company would yield to a 40-acre space rule, if and when oil was found on the flanks of the field. Commissioner Rankin following that hearing set the 80-acre space rule for the Lower Marine, classing the gas-distillate wells as gassers and placing their allowable accordingly.

Shreveport Strike

R. E. Allison's Ellerbe 1, Section 27-18n-14w, Caddo Parish, one mile north of Shreveport city limits, was completed Friday flowing 40 to 50 barrels of 45 gravity green oil per hour through quarter-inch tubing choke after perforating with 90 shots in Pettit (basal Glen Rose) from 5548 to 5568 feet. Tubing pressure was 350 pounds and casing pressure was not immediately gauged. Total depth is 6025 feet where seven-inch casing was set. The well is 14 miles northwest of the Sligo field, Bossier Parish, nearest point where basal Glen Rose lime produces.

W. L. McClanahan's Frost Johnson 1, SE NE SW 22-9n-13w, east of the shallow Converse field, Sabine Parish, had a showing of oil along with a gas blow-out in the Glen Rose above anhydrite at 4745 feet, but the well was killed and drill stem pulled, after which a core was cut from 4745 to 4750 feet that was hard lime and shale, leading to the belief that the blowout occurred below 4420 feet to which point test had been cored. The well was drilling ahead at 4834 feet in hard lime and shale but plans were to run electrical tester soon.

Two miles east of the 4200-foot horizon discovery well at Blue Lake, Sabine Parish, Boykin King's Sabine 1, C NW NW 19-7n-13w, was drilling hard lime below 4410 feet without any showings in the 4200-foot horizon. It may be taken to 6000 feet. Albert Reich's Giaque 1, NE SE NE 27-7n-14w, was reaming down to 3915 feet arranging to core. Observers now believe the oil in the 4200-foot horizon in the discovery well at Blue Lake probably is coming from 3840 feet where the discovery well showed 1200 feet of oil in drill stem but swabbed dry when casing was set. Two tests at Blue Lake spudded last week.

Southwest of this field and across the Texas line in Sabine County, H. R. Smith of Mexia, Texas, on a 10,000-acre block spudded Brooks Heirs 1, Isaac Low Survey, and may go to 6000 feet.

H. R. Rogers and W. J. Hunter have spudded Long-Bell 3, NE NE NW 30-13n-9w, Red River Parish wildcat for a Nacatosh test, later planning a 5000-foot test.

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Bienville Parish (Wildcat)—		
Gulf Ref. Co., Goodpine 1, 25-14-8..	*10,951	
Caddo Parish (Pine Island)—		
J. T. Driscoll et al, Self 4, 10-20-15.	150	2192
T. D. Sedberry, Stiles 1, 22-21-16...	*	1049
Nat Wiseman, Stiles 2, 27-21-16....	60	1036
Claiborne Parish (Lisbon)—		
Gulf Ref. Co., C. S. L. Patton 1, 12-20-5	1128	5313
Magnolia Pet. Co., D. E. Fowler 2, 32-21-4	374	5218
Sklar Oil Co., T. M. Kilgore 4, 11-20-5	1080	5322
Sabine Parish (Zwolle)—		
Plymouth Oil Corp., Kazerle 1, 3-7-13	*	2494
Lee Whitehurst et al, Bowman-Hicks 1, 14-7-14	50	2410
Webster Parish (Cotton Valley)—		
Mid-States Oil Corp., Woleri 1, 3-20-10	720	8678

*Failures; †Junked; ¶Million cu. ft. gas.

Deep Test Quits

Abandonment of Gulf Refining Company's Good Pine Oil Company 1, SE SW 25-14n-8w, Bienville Parish, as a dry hole at 10,951 feet in dark gray sandy shale of the lower Marine, topped at 9650 feet, eliminated the deepest present drilling operation in North Louisiana, and marked the end of the second deepest test ever drilled in this territory. The depth record for this area is 11,486 feet set by R. W. Norton's Payne 1, SE SE 27-23n-16w, Caddo Parish, on the downthrow side of the Rodessa field. This test was plugged back and completed as a gasser in the Glen Rose.

Gulf Refining Company's Bienville wildcat, the sixth 10,000-foot test ever drilled in North Louisiana, with elevation of 157 feet, logged massive anhydrite from 5303 to 5420 feet, and topped lower Marine at 9650 feet.

Next deepest test drilling at present in this territory is Standard Oil Company of Louisiana and Joe Modisett's Frost Lumber Company 1, NE SW 14-21n-1e, Union Parish, drilling Thursday in gray sand at 9975 feet.

Pine Island Block

Adjacent to a large block of acreage assembled around the old Pine Island field of Caddo Parish by Stanolind Oil & Gas Company in 1937 for a proposed deep test, which has not yet been drilled, H. L. Hunt has secured approximately 4000 acres recently in Townships 21 and 22 north, Ranges 14 and 15 west, with Gulf Refining Company and Sun Oil Company joining in the leasing play.

With a larger amount of saturation being logged on the south side of the Lisbon field in Township 20 north, Range 5 west, Sklar Oil Company which has been leasing actively in Section 14-20n-5w, has secured NW NW 15-20n-5w, for a test. Lyons & Neely's Lowery 1, C SE SE 11-20n-5w, recently completed flowing 14 barrels hourly through 23/64-inch choke without acidization, logged 22 feet of porosity in the basal Glen Rose lime horizon.

Gulf Refining Company's C. S. L. Patton C NW NW 12-20n-5w, completed during the last week flowing 47 barrels per hour, after acidization, logged porosity from 5290 to 5310 feet.

Knock out the WHIP ... add 20% to their life!

The high speeds, tall derricks and deep holes of modern drilling result in wire line whip and vibration. To meet this condition Patterson-Ballagh has developed the Wire Line Guide which stabilizes the line and reduces whipping to a minimum. Installed in multiple, these guides eliminate the hinging action at drum and crown block sheave, actually adding 20% to line Life. Sparkproof.

Ask for circular giving full details of Guide Installation and Operation.

PATTERSON-BALLAGH Wire Line Guide

PATTERSON-BALLAGH CORPORATION, Ltd.

PLANT & GENERAL OFFICES: 1900 E. 46th St., Los Angeles, Calif. • Maury St., Houston, Texas • NEW YORK OFFICE: 39 Cortlandt St., New York City, New York

MID-CONTINENT OFFICE: 1507

Arkansas Fields

Schuler well producing from Reynolds (distillate) lime.

Plans made for unit operation of Schuler field.

El Dorado, Ark.—Completion of 5 new wells, one as yet ungauged, in the Schuler field, Union County, Arkansas, last week brought the total number of producers in that field to 72, of which 56 are producing from the Jones (lower Marine) horizon.

One of the wells added last week was a crude oil producer from the Permian lime (Reynolds lime), which also has one gas-distillate producer at Schuler. The new Reynolds lime producer is Lion Oil Refining Company's Mayfield 4, Section 18-18-17, completed at 7693 feet, flowing 16 barrels per hour through 12/64-inch tubing choke after perforating from 7674 to 7678 feet.

Lion Oil Refining Company's Morgan B-6, SW NW SE 18-18-17, perforated with 116 shots from 7571 to 7592 feet in the Jones sand and flowed 107 barrels in first 12 hours through ¼-inch tubing choke with casing pressure 350 pounds and tubing, 250 pounds, with about 20 percent wash water. The company's Clarence 1, SWc Lot 7, SW 7-18-17, perforated with 123 shots from 7600-21 feet and was flowing ungauged through ¼-inch tubing choke. Total depth is 7663 feet. It is a Jones sand well. Near the west edge of production R. T. Adams' F. W. Powledge 1, NEc Lot 2, SW 7-18-17, topped Jones sand at 7616 feet and bottomed it at 7656 feet, but drilled to 7708 feet and was arranging to run electric log and set final casing string.

Plan Schuler Unitization

Efforts looking toward unitization of the productive acreage in the Schuler field, Union County, are under way but so far no such plan has been consummated.

However, owners of a considerable percent of the acreage are said to favor the plan and liberal concessions have been offered the others but so far without success.

For the week ending July 5 the daily average production there was 16,640 barrels from 65 wells divided among the various horizons as follows:

Morgan sand, 11 wells, 1105 barrels; Jones sand (lower Marine), 51 wells, 14,135 barrels; Permian lime (Reynolds), distillate, 1 well, 550 barrels; Permian lime (crude), 2 wells, 850 barrels. Daily average distribution to pipe line companies for that week were as follows: Lion Oil Refining Company, 5035 barrels; Root Petroleum Company, 4535 barrels; and Atlas Pipe Line Company (controlled by Lion), 6970 barrels.

As late as May producers at Schuler had to drop below their allowables because of a market demand and outlet, especially for the Jones sand sour crude but this situation has been changed as reflected by the nominations by purchasers for July at 30,000 barrels. However, the Arkansas Board of Conservation allowed only 15,000 barrels daily for July, contingent now on maintenance of reservoir pressure. As drilling at Schuler has been confined to principally two sections with

Rodessa has had wide influence in three years

Shreveport.—Rodessa, as an oil field, will be 3 years old on July 24, this being the completion date in 1935 of United Gas Public Service Company's I. L. Young 1, SE SE 21-23n-16w, Caddo Parish, which was completed at 6048 feet in Glen Rose lime below anhydrite, flowing 116 barrels per hour through ½-inch tubing choke.

With a total of 1018 producers, Rodessa to July 1, 1938, had produced a total of 69,574,763 barrels of oil, divided among the four parts of the field as follows: Arkansas (Capps area), 2,504,505 barrels; Louisiana (Caddo Parish), 45,453,973 barrels; Cass County, Texas, 20,102,026 barrels; Marion County, Texas, 1,514,259 barrels.

The per-well average of the field is 72 barrels daily, the average in the Arkansas side being 67 barrels per well; on the Louisiana side, 77 barrels; and on the Texas side, 68 barrels. The Texas side has passed Louisiana in number of new wells with 461 compared to 458 in Louisiana, although oil in Cass County was not found until January 1, 1936. The Arkansas end was one year old June 23.

Gas at Rodessa was discovered on August 7, 1930, south of the fault by R. W. Norton, who completed the first well as a small gasser at 5506 feet.

Discovery of oil at Rodessa marked the beginning of a new cycle of exploration and development in North Louisiana and Arkansas, resulting in introduction of geophysical exploration to any extent in this territory and drilling that resulted not only in development of other Glen Rose producing areas, but of finding of Travis Peak, lower Marine and Permian lime productive. Prior to July 24, 1935, only three tests in North Louisiana or Arkansas had ever gone below 7000 feet.

ARKANSAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Miller County (Rodessa)—		
Texas-Canadian Oil Co., K. K. Dickson 2, 11-20-28	960	6139
Johnson County—		
Ark. La. Gas Co., Hudson 2, 14-10-24	¶40	3401
Union County (Schuler)—		
Alice Sidney Oil Co., Powledge 4, 7-18-17	1560	7670
Lion Oil Co., Marvin 1, 7-18-17	173	7718
Mayfield 4, 18-18-17	384	7726
Morgan B-6, 18-18-17	214	7637

*Failures; †Junked; ¶Million cu. ft. gas.

edges of three other sections in proven limits, this allowable probably will stand, an average of about 288 barrels, or be reduced if the pressure declines too rapidly, until a major extension occurs.

Leasing Activity

A great deal of leasing and geophysical activity took place last week in South Arkansas. In Calhoun County, Amerada Petroleum Corporation was shooting in the southeast part of the county. In Columbia County, near the LaFayette County line, south of the village of McKamie, where Ohio Oil Company has been shooting a large block it has under lease, Barnsdall Oil Company leased over 1000 acres in Township 17, Range 23.

In Columbia County, near McNeil, Atlantic Refining Company, Phillips Petroleum Company, Stanolind Oil & Gas Company, and Tide Water Associated Oil Company have been shooting in Township 16, Range 20. Standard Oil Company of Louisiana has been shooting in Township 17, Range 19, Tide Water Associated also has a unit working between Section 14-17-20, Columbia County, and the village of Emerson.

Northwest of Fordyce, Dallas County, J. T. Marwick has leased 6000 acres around Section 20-10s-13w, for a 3200-foot test to spud by next August 15. S. S. Alexander is completing final details on his 17,000 acres in parts of Dallas, Calhoun and Ouachita counties, preparatory to starting a test by September 1.

Magnolia Petroleum Company is shooting in Townships 14 and 15, Range 24, north of Lewisville but in Hempstead County. In LaFayette County, Barnsdall Oil Company has been detailing a block of 5500 acres on which it has a geophysical option, the block being north of the village of Canfield. Nivla Oil Company of Tyler, Texas, is renewing leases it owns around Section 18-15-24. In Miller County, The Texas Company is renewing leases in Township 18, Range 27. In Ouachita County, Arkansas Fuel Oil Company is shooting southwest of Camden in Township 13, Range 18, where a shallow Nacatosh well was completed several years ago but all offsets were failures. It was known as the Camden or Bragg area.

Although it is reported to have logged but 15 feet of Jones sand saturation in its recently completed east edge well, B. M. Dumas 1, NE NW 21-18-17, at Schuler, Atlantic Refining Company showed its further faith in the trend of the field to the east by securing S½ SW NW 22-18-17, from W. D. Ambrose of Fort Worth.

Four Arkansas starts

El Dorado, Ark.—Four drilling permits were authorized last week by the Arkansas Board of Conservation, as follows: Columbia County (Village); Standard Oil Company of Louisiana, Minnie Harris et al 1, located 660 feet south and west NEc NE SW 15-17-19; Union County (Schuler), Lion Oil Refining Company, Marcus 4, located 330 feet south and east NWc Lot 3 SW 18-18-17; Marvin 2, located 330 feet north and west SEc Lot 1, SW 7-18-17; National 1, located 330 feet south and east NWc NE SW 17-18-17.

Hinds County location seeking more salt plugs

Jackson, Miss.—One completion, a gas well on the northeast edge of the Jackson gas field, and one new location, the latter a Hinds County wildcat, were reported last week in Mississippi.

The location is G. Jeffreys' Gaddis Farms 1, NW SE 26-7n-4w, on a drilling block of 950 acres with a total lease block of 6000 acres, E. R. Owen of Jackson is drilling contractor. This location is in the general area of the Edwards salt dome. According to one geological theory other salt domes in that general area are likely to be found, as it is theorized that the old gulf embayment and deep syncline followed a north-northeast and south-southwest direction approximately following the Big Black River in west Hinds County. From this geosyncline minor, according to this theory, narrow troughs and depressions traversed and reached outward almost at right angles to the major embayment in an east-and-west direction. The comparative ages of these troughs are difficult to define but possibly the salt movement was older in the major embayment and there the upward movement of the salt may have ended in pre-Wilcox times, the thinning of the Wilcox on top of the domes being due rather to shallow deposition than salt penetrating upward. That oil, gas or sulphur will be found in west Hinds and east Warren counties in the Wilcox, Ripley, Selma Chalk, Eutaw, and even in lower Cretaceous would not be surprising.

SOUTHEASTERN STATES
Completions
MISSISSIPPI

Company, Well and Location	Init. Prod. Bbls.	Depth
Rankin County (Jackson)—		
Wilmut Gas & Oil Co., Pearl City 1, 31-6n-2e	¶52	2410

*Failures; †Junked; ¶Million cu. ft. gas.

Moving in rig for test to 6000 feet in Alabama

Mobile, Ala.—H. A. Stebbinger, who drilled the discovery Glen Rose gas-distillate well at Joaquin, Texas, Shelby County, last week started moving in rig for a contemplated 6000-foot test in Barbour County, Alabama, on a large block of acreage assembled several months ago after geological work by W. R. Julian of Shreveport, Louisiana. Revised location for the test is Robertson 1, NE NE 19-10-26, Barbour County.

Union Producing Company has a 4-man geophysical unit working around the Hatcetigbee anticline in southwest Alabama, in Baldwin, Clarke, Choctaw and Washington counties, especially that part north, south and east of the town of Jackson, Clarke County.

Twenty engineers and geologists employed by Sun Oil Company arrived several days ago at Fort Myers, Florida, for seismograph surveys in Lee and Hendry counties, Florida.

Striped Candy for Mature Appetites

Remember the grocer who gave you a sack of peppermint candy when dad paid the bill on Saturday night? You liked to go there, didn't you?

We've kept that picture in mind for thirty years. We try to dish out a type of service that will make you enjoy dropping in. We try to be cheerful and helpful and honestly appreciative, so that PELCO stores will be oil field bright spots in many memories.

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT LOUISIANA

Lake Charles—Houma—Converse
New Iberia—Rodessa—Monroe
Cotton Valley—Greggton
Houston

Illinois Developments

Wayne County wildcat estimated at 1000 barrels. Good well opens new Clay County field.

Olney, Illinois.—Two new pools were added to Illinois' rapidly growing oil area last week, the discoveries in both areas indicating excellent production.

H. H. Weinert, Inc.'s R. C. Twist 1, Section 33-2s-7e, 6 miles southwest of Fairfield, Wayne County, gushed in from McClosky saturation between 3309-26 feet and was immediately shut in to await storage and pipe line facilities. It is an estimated 1000-barrel well, and located 2 miles north of The Texas Company's Silverman lease in Big Mound Township. The company is moving in rig for its R. C. Twist 2, while The Texas Company's Hubbard 1 and H. H. Weinert's Morlan 1, both in Section 33-2s-7e, were announced as locations for immediate drilling. Other tests in the area should be announced this week, with some surrounding leases held by Pure Oil Company and Carter Oil Company.

Ohio Oil Company's H. Hardy 1, Section 9-3n-7e, Stanford Township, Clay County, 5 miles northeast of Flora, recovered a 9-foot McClosky core from 2958-67 feet which a drill stem test indicated was good for 80 barrels an hour initial. The sand was encountered at the highest level of any well yet drilled in Clay County. Casing was being set and cemented, after which a test will be made. Kingwood Oil Company had the drilling contract.

Other wildcats closely watched included Leach Brothers A. Lee 1, Section 11-1s-10e, Albion Township, 5 miles north of Albion, Edwards County, which was being prepared for acid treatment. Drilled by a local outfit with a cable tool rig constructed from dredge-ditching equipment, the wildcat encountered an encouraging McClosky saturation a week ago. Delay in completion was caused by the necessity of backers raising cost of the treatment. The showing at the wildcat is sufficiently good to bring Edwards County into this summer's Basin play.

Failing to make a well after drilling 6 feet of McClosky saturation because of salt water, Gulf Refining Company's R. Wilson 1, Section 30-1s-5e, Hickory Hill Township, Wayne County, was drilling with cable tools below the saturation, 2990-96 feet. The well swabbed considerable oil before acid treatment released the salt water.

Also in Wayne County, Pure Oil Company's C. A. Billington 1, Section 23-1n-7e, was coring at McClosky depth and closely watched as possibly furnishing a 1-mile easterly extension to the company's Cisne field.

The Riggs pool of northeast Wayne County, dormant for several months after drilling of several dry holes, was brought again into favor with an apparently successful Pure Oil Company's S. S. Gill 4, Section 27-2n-8e, Zif Township. The well had casing set to an excellent McClosky saturation, bottomed at 3039 feet. The well is said to have flowed free oil out of the top of the hole before casing could be set.

In Richland County, The Texas Company's O. Zerkle 4, Section 23-4n-10e, drilling at 2750 feet, and Pyramid Petroleum Company's G. Sly 2, Section 22-4n-10e, drilling at 2300 feet, should complete this week. One other test was drilling below surface pipe, one was spudding in, two had pits dug, one had derrick up and two were locations in this recently opened field.

In the vicinity of The Texas Company's Raccoon Township, Marion County, discovery, a dozen wells were drilling or preparing for immediate starts. Deepest was this company's H. Carbin 1, Section 5-1n-2e, an offset 660 feet to the west, which was below 1660 feet. Flowing 30 barrels an hour, the discovery had been drilled to a McClosky saturation and plugged back to the Benoist sand. It is described as the best Benoist producer in the basin. A third well by The Texas Company, Comull 1, a west offset to the H. Corbin 1, was setting surface casing.

Gill & Crosby started Mabel Gibson 1, Block 10, Lot 3 in the 500 block East Kell, as the first northeast Centralia test. Southeast of Centralia 6 miles, a stray sand cored by L. Williams' J. McCrory 1, Section 24-1n-1e, Centralia Township, between 1401 and 1418 feet showed two feet of pay. It was the fourth pay sand cored by the test. At 1520 feet at last report, it is searching for the Stein sand expected at about 1560 feet. J. Q. Gill et al's Smithy 1, 3 miles south of Centralia on Highway 1, drilled through the McClosky, was plugging back and ran casing for a test of the Stein sand between 1753 and 1776 feet. A fair well is expected to result.

Outstanding among announcements of new wildcat tests were: Straus et al's L. Gaddy, Section 20, Lukin Township, Lawrence County, which will be drilled to the St. Peter sand unless commercial production is found at a higher level, and Garnier Brothers' Iuka dome test on Section 6-2n-4e, Iuka Township, Marion County. Carter Oil Company is a heavy holder of acreage in the vicinity of the Iuka test, which is on a highly regarded structure.

In Clay County, Carter Oil Company's Neely 1, Section 13-3n-6e, Logan Township, south offset to Kingwood Oil Company's F. Graham 1 discovery, was cementing casing after drilling to 2991 feet. The bit is believed to have passed the McClosky, and a Schlumberger test was made last week. Outcome of the well, second to be drilled in this pool, is in doubt. Gulf Refining Company's R. Pearce 1, Section 13-3n-6e, Logan Township, 600 feet west of the Carter well, was drilling below 2100 feet.

ILLINOIS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Christian County—		
Independent Producers & Refiners, Warren 1	•	1727
Clinton County—		
D. E. Hawkins, McNeil 1	200	1387
Newton & Ward, Gross 3	70	980
F. L. Heidt, Lampin 1	•	1509
Effingham County—		
Kingwood Oil Co., McWhorter 1	•	5823
Fayette County—		
Carter, Logsdon 2	68	1690
Jasper County—		
Obermayer, Adkins 1	•	2708
Jefferson County—		
Carter O., Stover 1	246	1981
Marion County—		
Texas Co., Tate 1	775	1915
W. R. Hayes, Midwest Area 1	500	1379
Storer 1	375	1381
Broddus, Rebstock 1	400	1381
Eason Oil Co., Holman 1	300	1360
Gill et al, Laughlun 1	250	1373
Geo. S. Anderson, Gerran 1	150	1392
Hawley et al, Storer 1	150	1378
Richland County—		
Mammoth Producers & Refiners, Yount 1	425	3047
Stewart 1	•	3201
Pyramid Oil Co., University of Chicago 2	•	3127
Texas Co., C. Zirkle 1	•	3125
Wabash County—		
Ridgefarm O. & G. Co., Price 9	65	1571
Wayne County—		
Texas Co., Silverman 3	•	3460

•Failures; †Junked; ¶Million cu. ft. gas.

EASTERN FIELDS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
NEW YORK		
Allegany County—		
Wm. Taylor Est., Reid farm, Alma	12	1370
Porge Oil Co., Anderson farm, Alma	10	1360
Messer Oil Corp., "M," White farm, Alma	8	1380
"M," White farm, Alma	9	1392
Cris Oil Co., C. W. Vossler farm, Alma	5	1510
Cleveland Bros., M. E. Church lot, Alma	4	1160
Gilligan & Dermitt, Gilligan farm, Bolivar	8	1248
Gilligan farm, Bolivar	6	1240
Bradley Prod. Corp., Richardson farm, Bolivar	5	1320
Forest Oil Co., Ackerman farm, Bolivar	8	1406
J. A. Wilber, Northrup farm, Bolivar	6	1425
Homestead Oil Co., Homestead farm, Bolivar	5	1338
Homestead farm, Bolivar	7	1345
Bradley Prod. Corp., Sawyer farm, Bolivar	6	1360
Sawyer farm, Bolivar	4	1372
Sawyer farm, Bolivar	5	1365
Sawyer farm, Bolivar	7	1375
Marsh Oil Co., Withey farm, Bolivar	8	1359
Sloan & Zook, McDivitt farm, Bolivar	3	1360
McDivitt farm, Bolivar	4	1378
Swan Oil Co., Colegrove farm, Genesee	2	1355
Messer Oil Corp., Dunning farm, Genesee	1	1370
Dunning farm, Genesee	2	1362
Bradford Oil Co., Willetts farm, Genesee	8	1376
Willetts farm, Genesee	7	1382
Willetts farm, Genesee	8	1390
Willetts farm, Genesee	9	1383
Bradley Prod. Corp., Coon farm, Genesee	6	1350
Coon farm, Genesee	5	1342
Ebenezer Oil Co., Hochsteter farm, Scio	6	1140
Shallow Sand Oil Co., Harlan Thomas farm, Scio	5	456
Chenunda Creek Oil Co., Richmond farm, Willing	3	1045
Gas Wells		
Empire G. & F. Co., Daniel Clark farm, Willing	¶19	4570
Water (Pressure) Wells		
N. V. V. Franchot, Reddy farm, Alma		1410
Reddy farm, Alma		1419
Bradley Prod. Corp., Sawyer farm, Bolivar		1376
Sawyer farm, Bolivar		1368
Sawyer farm, Bolivar		1372
Sawyer & DeFusto, Van Curren farm, Bolivar		1320
Forest Oil Co., Ackerman farm, Bolivar		1410
New York Oil Co., Brown farm, Bolivar		1435
Brown farm, Bolivar		1442
Brown farm, Bolivar		1450
Jacob Trinkle Est., Trinkle farm, Genesee		1360
Messer Oil Corp., Dunning farm, Genesee		1340
Dunning farm, Genesee		1348
Shallow Sand Oil Co., Harlan Thomas farm, Scio		445

•Failures; †Junked; ¶Million cu. ft. gas.

Eastern States

Birk City west extension try is dry.

Acid helps well on Daviess County side of pool.

Pittsburgh.—Failure to extend the new Birk City field to the west in Henderson County centered interest on the Daviess County side of this new Kentucky oil area. Two oil wells were completed, bringing producers to 16.

Kentucky Natural Gas Company's A. Haynes 1, a half mile west of present production on the Henderson County side, found the McClosky dry. Drilled by Thompson Drilling Company, it was the second unsuccessful attempt to extend the field westward, a well on the Otis Haynes tract, a mile from present production, having previously furnished the first dry hole in the Birk City area.

Completions were Hoosier Drilling Company's C. T. Blackwell 5, and Hupp et al's T. Jones 2, both on the Henderson County side. The Jones well swabbed 500 barrels initially. The Blackwell 5 swabbed 15 barrels an hour and was to be given acid treatment. Completed a week ago with an initial of 10 barrels an hour, the C. T. Blackwell 4 was producing 480 barrels a day last week after acid treatment. The. No. 6 on this lease has casing set to the McClosky level, and will drill in with cable tools this week. It was Hoosier Drilling Company's C. T. Blackwell 1 which opened the pool last April, furnishing the first McClosky sand production outside the state of Illinois.

On the Daviess County side, Major Oil Company's O. Greer 1 was given acid treatment which boosted production from 165 barrels a day to 1400 barrels. The well had been pinched in for a time last week to await completion of pipe line connections. Activity increases in this area: The Major company's Harrington 1 was drilling at 1400 feet, and its Saunders 1 was at 1175 feet. At Stanley, 3½ miles from the O. Greer 1, Major Oil Company is rigging up the Will Mulligan 1. Other wells in the Greer area include Globe Oil Company's James 1, drilling at 1400 feet after passing through water in the Barlow sand, and A. R. C. Oil Company's Graham, Duncan & Bennett 1, spudding in 2000 feet from the O. Greer 1.

Imperial Oil & Gas Company's B. Gilmore 1, at Hebbardsville, abandoned as dry at 2113 feet, will be drilled deeper.

Operators in the Birk City field, which now has a daily production of about 4000 barrels, have instituted a Sunday shutdown to aid pipe line companies in handling production in the rapidly growing field. Wells are being closed from 6 p.m. Saturday to 6 p.m. Sunday.

Sites for warehouses and storage rooms have been leased at Henderson by several supply companies for service in the Birk City area. Among the firms to be represented are National Supply Company, Frick-Reid Supply Corporation, Oil Well Supply Company, Jarecki Manufacturing Company and Continental Supply Company.

In Sullivan County, Indiana, A. S. Reed's O. L. Ogle 1, Section 35-8n-10w, Turman Township, threw oil over the derrick top when oil backed by a 2,000,000 cubic foot gas flow was encountered at 820 feet. Value of the strike was not immediately determined.

Having passed Indiana's previous depth record, Carter Oil Company's C. Graulich 1, deep test on Section 4-7s-14w, Black Township, Posey County, being drilled by Parker Drilling Company, was drilling at 4300 feet in hard formation. It was believed near the Devonian formation. Two new tests were started in this county this week. Sun Oil Company's W. W. Gray 1, Section 29-8s-14w, Point Township, 13 miles southwest of Mt. Vernon, started with a rotary rig, and the same company's J. Heil 1, Marrs Township, was completing derrick. The tests will be drilled by H. & H. Drilling Company and Taylor Drilling Company.

Damron & Company, Owensboro, Kentucky, who have filed leases on more than 100 tracts in Spencer County, are conducting a geological survey in the vicinity of Rockport. A test near Rose Hill, west of Rockport, is expected to be underway by August.

The Oriskany sand was found dry at New York State Natural Gas Company's J. D. Morley 1, Bingham Township, Potter County, on the Quaker State side of the New York-Pennsylvania deep sand gas fields. The sand was between 5279-5302 feet, and the test bottomed 23 feet below the Oriskany.

Company, Well and Location	Init. Prod. Bbls.	Depth
OHIO		
Athens County—		
C. W. Nuzum, Nickoson 1	¶.20	1825
Kachelmacher Est. New York Coal Co. 1	*	1099
Belmont County—		
Union G. & O. Co., Hinkle 1	*	1923
Knox County—		
H. E. Perkins, McMillan 1	*	2935
Licking County—		
Bebout Bros., Wright 1	10	723
Medina County—		
C. B. Wood, Jividen 3	*	425
Meigs County—		
A. N. Bengel, Chase 1	*	1125
Byron Bing, Lambert 4	*	1004
Monroe County—		
T. E. Drum, Baker 3	1	1300
Morgan County—		
D. T. Orndoff, Boileau 41	¶.13	555
Washington County—		
Ed Cline, Torpy 7	5	1690
Best Run O. & G. Co., Mossburg Hrs. 1	¶.06	1474
Heldman et al, Epler 3	¶.04	1180
C. Ross, Cooper 18	*	971
KENTUCKY		
Breckenridge County—		
Flesher & Galey, White 1	*	1800
Daviess County—		
Dougherty & Ellis, Leet 3	25	....
Hancock County—		
Walker et al, Boling 7	5	390
Kentucky Nat. Gas Co., Anderson 1	*	835
Henderson County—		
Hupp et al, Jones 1	300	1901
Mecca Oil Co., Wilson 4	¶.80	495
Lee County—		
Price Fraley et al, Flahaven 2	10	727
McLean County—		
J. C. Miller, Foley 12	25	1140
Sunflower O. & G. Co., Shockley Bros. 7	*	1458
Martin County—		
Kentucky-W. Va. Gas Co., Preece 5242	5	1377
Ohio County—		
Cane Run Pet. Co., Rhoades 22	20	....
Smith et al, Downes 6	*	333
Powell County—		
A. E. Wireman, Stewart Bros. 4	1	....
WEST VIRGINIA		
Cabel County—		
Toms Creek Gas Co., Davis 1	¶.10	3714
Hatfield Gas Co., Hatfield 1	*	3530
Gilmer County—		
Massey & Jarvis Drilling Co., Withers 2	¶.16	1280
H. B. Scott, C. Towman et al 1	*	2414
Hancock County—		
R. J. Braden Co., Brenneman 54	4	976
Kanawha County—		
Mullins Gas Co., Bonham 1	¶20.00	5100
West Virginia Gas Corp., Layne et al 1	¶1.40	4931
Ritchie County—		
W. M. Schroeder, McGinnis 1	*	1837
Wood County—		
Lowther & Shuman, Hendershot 1.	*	2270
PENNSYLVANIA		
Allegheny County—		
Rodgers Co., Wolf 3	*	2050
Beaver County—		
Rope et al, Ramsey 1	*	....
Fayette County—		
Fox Bros., Ricks 1	¶6.00	1392
Greene County—		
Union G. & O. Corp., Braddock & Cook 4	1	....
Tioga County—		
North Branch Co., Ackley 1	¶2.70	4505
PENNSYLVANIA		
Bradford District		
Ryder Scott Co., Fee	4	....
South Penn Oil Co., Reservation	½	....
J. H. Brahaney, Johnson	2	....
Bradford Transit Co., 13 wells	13	....
Forest Oil Corp., 3 wells	3	....
Niagara Oil Corp., 6 wells	6	....
J. W. Snyder, Booth	2	....
BRADFORD: Water (Pressure) Wells		
Forest Oil Corporation, 1 well	...	....
Forest Petroleum Corporation, 1 well	...	....
Niagara Oil Corporation, 3 wells	...	....
Victory Oil Co., Wright, 1 well	...	....
Butler-Armstrong District		
Hoch Oil & Gas Co. & Smith, John Brant	3	....
Middle District		
Strong Oil Co., Strong Oil Co.	1	....
M. M. Master, Rickenbrode	2	....
Cities Service Oil Co., Red Fox	5	....
Fryburg Motor Co., Deets	1	....
NEW YORK-PENNSYLVANIA: Gas Field		
Sylvania Corp., H. Hand 2	¶	....
Wittmer et al, George Caffrey	*	....

Company, Well and Location	Init. Prod. Bbls.	Depth
INDIANA		
Daviess County—		
A. T. Spaulding et al, F. O'Brien 2	*	666
W. F. Souers et al, E. Helderman 2	*	598
Jay County—		
J. H. Say, E. Uptegraft 2	10	1042
Jennings County—		
Hazelton Oil Co., Inc., O. Scherschlight 1	¶	1340
Knox County—		
L. E. Jordan & Son, L. Bond 1	¶	803
Perry County—		
Chas. E. Dice, Christ Hempfling 7	5	505
Frank Damron, A. Gramelspacher 1	*	928
C. A. Roederer, Ida P. Rissler 3	*	214
Pike County—		
Murphy Oil Co. of Pa., Roscoe Cox 2	10	990
Posey County—		
Sun Oil Co., Sophia Dietz 1	100	1749
Spencer County—		
Haney & Hollingsworth, A. H. Bergenroth 1	*	843
Sullivan County—		
Niagara Oil Corp., C. Blount 5	10	741
H. D. Williams Trustee, Fred Pierson 1	*	855
A. S. Reed, J. Springer 1	*	2753
Vanderburg County—		
Vanderburg Oil Corp., G. W. Hornby 8-38A	10	900

*Failures; †Junked; ¶Million cu. ft. gas.

Rocky Mountain Fields

Muskrat gas field extended one mile west.

New oil horizon found in old Cody field.

Casper, Wyo.—The Muskrat gas field, Fremont County, central Wyoming, was extended a mile west in the completion of an excellent gas well. Sinclair Wyoming Oil Company's Muskrat 2-B, NW NW NE 4-32n-92w, gauged 40,000,000 cubic feet of gas initial from the Lakota sand. Only 2 feet of sand was tested for the large production with the 6⅝-inch casing set at 5319 feet in hole bottomed at 5321 feet. Casing may be perforated further up the Lakota formation for additional gas production.

A new oil horizon was brought in by Paul Stock in an old abandoned field in Park County, Wyoming. Stock's Rosseau 1, SE SE NE 20-53n-101w, Cody field, (Shoshoni anticline), bailed 10 barrels of oil and no water per hour from the Embar lime. The 6¼-inch production casing is set at 4754 feet and hole bottomed in the lime with the producing formation not yet entirely penetrated. Total depth is 4809 feet.

Stock has run 1000 gallons of acid and is building pumping derrick and rigging up equipment for a production test. It is expected the well will make around 400 barrels per day. The Cody field is ideally located, being one half mile from two refineries on railhead, two miles from supply stores, and four miles from Stock's residence in Cody. The field had formerly been tested by Ohio Oil Company for Embar production by two wells which proved to be down structure. The Stock well was taken over from the old Leonard Petroleum Company and deepened from 2010 feet. It is located 1800 feet down structure, according to recent mapping of the field.

The Cody structure is a half mile wide and three miles long and is located just on the east outskirts of the town of Cody. Below the Embar lime formation are the Tensleep, Amsden, and Madison formations, which normally carry black oil in the Big Horn Basin fields of northern Wyoming, and which Stock plans to test.

Another surprise completion occurred this week in the old Warm Springs field, Hot Springs County, Wyomnig. The field taken over a year ago by D. D. Gibson, who is operating a topping plant at Thermopolis, cleaned out 14 old producers in the field, and has been running about 140 barrels daily. On the West Dome of the field, Gibson drilled Fee 26, SW NW SE 35-43n-93w, and bailed 25 barrels of black oil per hour from the second break in the Embar at 1059-1063 feet. The lime section was not acidized.

In the new Cole Creek field, 13 miles northeast of Casper, Natrona County, General Petroleum Corporation is building 136 foot derrick for State 1, CNW NE SE 1-635n-77w, one mile north of the discovery well. The discovery well used a 122-foot derrick, and larger derrick is being used in the second well with the possibility of carrying the test to the Sundance formation if larger production is not encountered in upper horizons.

The discovery well, Government 1, NW NW SE 21-35n-77w, has produced 6000 barrels since it went on production test on June 10. The crude has been trucked to the Socony-Vacuum refinery 10 miles to the southeast and stored. Production in the discovery is from the Lakota sand at 5977-8013 feet with total depth at 8020 feet. General Petroleum Corporation is the western producing subsidiary of Soconoy-Vacuum. Major objective of the second test will be the Wall Creek horizons where good oil cores were recovered in the discovery, but failed to yield commercially on testing. As the well later drilled ahead for the Dakota series, it was discovered that the highly saturated lower section of the First Wall Creek had bridged off.

Stanolind Oil & Gas Company is starting another deep well to the Tensleep sand in the Salt Creek field, Natrona County, Wyoming. The first report, Midwest Oil Company 8-TP, CNW SW 35-40n-79w, is digging cellar. Stanolind's Wyoming Associated Oil Co. 26-TP, CSE SW 26-40n-79w, is waiting on cement to set around 9⅝-inch casing at 2834 feet with total depth at 3050 feet. Stanolind's Wyoming Associated Oil Company's 26 TP, CSE NW 35-40n-79w, is completing this week by the selective method after several weeks of perforating and testing with total depth at 4002 feet and casing set at 3996 feet.

West and southwest limits to the Lance Creek field were defined in two tests which finaled this week. J. E. Manning & Hewlett Bros.' Elsie Peklo 1, SE SE SE 1-35n-65w, is plugged and abandoned after showing 23 barrels of water per hour from the Dakota sand at plugged depth of 3850 feet. The casing was perforated at 3810-20 feet and 3830-50 feet. The well had backed up from water in the Leo sand.

Checking 1000 feet lower than the Peklo well, C. L. Price's Lamb 4, CSE SW 12-35n-66w, got a hole full of water from the Dakota formation with total depth at 4830 feet. The 7-inch string set at 4815 feet is being pulled and the hole plugged.

Continental Oil Company is moving in rotary equipment for Apex 3-OPC-3, NE NW 34-36n-65w, an inside location of the east side of the Lance Creek field. Company's Apex 4-OPC-2, NW NE SE 34-36n-65w, is wainting on cement to set around the 7-inch production casing at 5499 feet, after coring excellent saturation in the Leo sand to 5456 feet.

J. M. Huber Corporation's H. & M. 1, NW NE NE 8-35n-65w, southeast extension test to Lance Creek, is at critical depth, coring in the Leo sand at 5488 feet, and showing good saturation.

A test projected to the Shannon sand, below the White River producing formation at Shawnee Creek, Converse County, Wyoming, is being rigged up by Jack Decker. The well is Simonson 1, SE NE 16-32n-68w, at the town of Shawnee. The 10-inch casing will be carried and set through the White River formation. Three tests in the Shawnee area have gone through the Shannon sand, but have been considered inconclusive. The two Wysshawn wells located to the south of the fault and on the up-throw side, and the E. B. Jone's well in 16-32n-69w, located 3 miles north of the fault, are considered by some geologists too far north of the major fault transversing Shawnee.

First test to the Madison lime in the Big Lake field, Stillwater County, Montana, the Indian Territory Illuminating Oil Company's Hepp 2, NWc NW 25-1n-2e, is tied up with a fishing job at 5005 feet.

The Cut Bank field, Glacier County, Montana, had a revival of activity this week with four first reports, after several weeks of inactivity. The new drilling operations are: A. R. Pardue's Tribal 171, SW SE 7-32n-5w, spudding; Glacier Production Company's State 3, SW SE SW 16-33n-5w, rigging up; Santa Rita Oil & Gas Company's Lander 3, CS 16-35n-6w, drilling at 300 feet; and Santa Rita Oil & Gas Company's State 1, NW NW SW 36-34n-6w, rigging up.

MOUNTAIN STATES Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
Glacier County (Cut Bank Field)—		
Texas Co., No. 1, Section 9 Unit, cnw nw 9-32n-5w	354	3035
Glacier Production Co., Coburn 4, ne sw se 5-33n-5w	200	2803
Cobb & Reagan, Jackson 3, se sw nw 5-32n-5w	32	2787
Toole County (Kevin-Sunburst Field)—		
West Kevin Community Syndicate, McCrary 1, ne nw 3-34n-4w	15	1711
Henry Vanderpas, Ward 2, se sw nw 28-35n-3w	60	1706
WYOMING		
Carbon County (Oil Springs Field)—		
Cunningham Oil Co., Union Pacific-Cronberg 1, se ne 7-23n-79w	¶55	2232
(Big Medicine Bow Field)—		
Ohio Oil Co. & California Co., State-Griffin 3, csw nw 36-21n-79w	*	5711
Niobrara County (Lance Creek Field)—		
J. E. Manning & Hewlett Bros., Elsie Peklo 1, se se se 1-35n-66w	*	5250
Sublette County (LaBarge Field)—		
Texas Co., Government 3-H, nw sw 27-27n-113w	15	1004
Fremont County (Muskrat Field)—		
Sinclair-Wyoming Oil Co.'s Muskrat 2-C, nw nw ne 4-32n-92w	¶44	5321
Albany County—		
California Co., Holst 12, se nw ne 13-17n-77w	120	3455
UTAH		
Dagett County—		
Mountain Fuel Supply Co., Murphy 3-D, nw nw sw 29-3s-24e	¶16	6053

*Failures; †Junked; ¶Million cu. ft. gas.

Missouri wildcat has derrick up

Nevada, Mo.—Veronica Oil Company is preparing to drill a wildcat test on Section 36-37-33, Vernon County, northwest of here which is scheduled for 2500 feet and may be carried to 3000 feet. It will be drilled by A. J. Hazlett, of Okmulgee, Oklahoma.

The Southwestern Missouri area has been mapped by Frank C. Greene, formerly on the geological staffs of Shell Petroleum Corporation and of Skelly Oil Company and now of the Missouri Geological Survey, who considers prospects for commercial oil or natural gas production to be better than average.

Derrick for the test has been erected.

Michigan Fields

Clare County wildcat opens large area for development. Flow of 216 barrels daily recorded from Monroe lime.

Mount Pleasant, Mich.—Commercial oil production at 3895 feet from the Monroe limestone was established July 10 in S. J. Higelmire Trustee's Van Horn 1, NE SW NW Section 3-18n-6w, Clare County, a rank wildcat, which bids to open a major drilling play this summer.

Producing from 5-3/16-inch casing, the well flowed 41 barrels the first 30 minutes, 287 barrels the first 24 hours, and 216 barrels the second 24 hours. About 200 pounds back pressure was being held at the casing head after the third hour.

Geographically, the wildcat producer is 4 miles south of Temple on U. S. Highway 10; 13 miles west and 12 miles north of Clare. Geologically it is on the northwest end of the major developed Mount Pleasant structure; 18 miles northwest of the old Vernon field, Isabella County (Monroe production) and 40 miles northwest of the Porter field, Midland County (Dundee production). It lays about 30 miles due east of the Buckeye field.

Fairly concentrated wildcat testing had been made east and southeast of the strike. Gulf Refining Company is drilling six miles southeast in Lincoln Township (18n-5w), Clare County, Section 21, having logged 21,000,000 cubic feet of gas in the Michigan Stray last week at 1555 feet.

With the exception of a test drilled in 1930 in Section 33 by the Diem Development Company on Salter 1, no previous testing had been carried on in Freeman Township. Salter was abandoned as a failure at 4021 feet after logging Monroe top at 3930 feet (elevation 1018 feet).

Three miles east of the discovery producer, Pure Oil Company in 1937 drilled a 4017-foot test on Apel 1, NW SW 31-19n-5w, Greenwood Township, Clare County. This test logged a 20,000-foot gas show at 4009 feet but was carrying 3000 feet of water 7 feet deeper. Top of Monroe here was 3995 feet; elevation 1135 feet.

Another test was drilled by McClanahan Oil Company at Frackleton 1, SE SE SE 18-18n-5w, Lincoln Township, Clare County, in 1934. It was abandoned at 4035 feet as dry after drilling a gas show at 3964 feet.

The district potentially opened by the well is large, and while there are no condemning markers, it is also true there are no guiding markers. Development alone can give more than a rough guess as to the extent of the area or the directional trend.

Top of Monroe limestone on the Van Horn wildcat producer was logged at 3891 feet with a gas-oil show at 3892 feet. It was bottomed at 3895 feet in flow oil. Elevation is 1089 feet.

First two days under production the well flowed at about one hour and forty minute intervals. Gas volume was estimated between 3 and 5 million cubic feet. Gravity tests were not reported but the oil appeared similar to that of the Vernon field which ranged around 41 in the early development. Sulphur odor, very high in Vernon, was not particularly noticeable.

The Higelmire trusteeship which promoted and developed the well had 200 acres in the drilling block and 1300 acres outside of the drilling block.

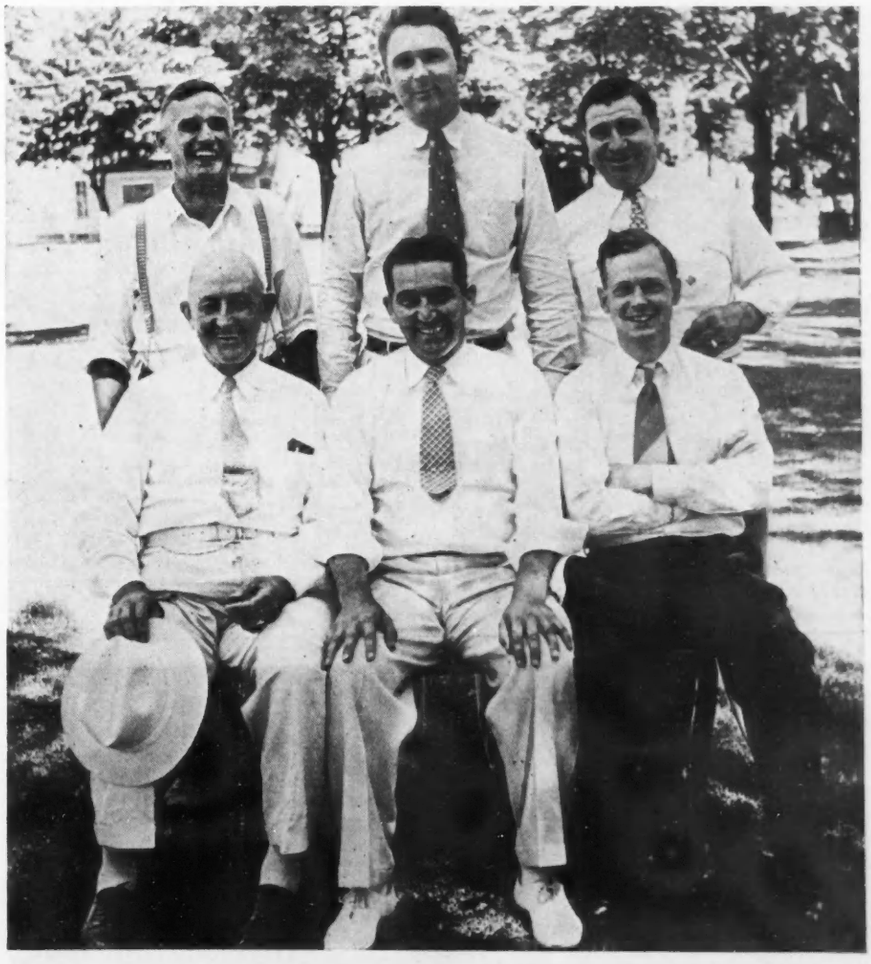
The Pure Oil Company has the largest holdings of either major or independent in the play, having contributed

MICHIGAN
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
M. L. Jorgenson, Wisniewski 1, ne ne ne 32-4n-12w	*	1650
S. B. Hood, Miller 2, se nw nw 16-3n-13w	200	1654
R. M. Burch, Miller 1, nw ne ne 17-3n-13w	400	1665
Arenac County—		
Leonard & Olympia, McTaggart 1, se sw ne 26-19n-3e	12	2972
Swanson Oil Co., Shepard 4, se nw sw 4-20n-4e	900	2407
Clare County—		
S. J. Higelmire, Van Horn 1, ne sw nw 3-18n-6w	286	3895
Gladwin County—		
Gulf, State 3, ne ne sw 20-17n-2e	76	3543
T. F. Caldwell, Flynn 1, nw sw nw 4-17n-1e	20	3641
Sun, Strohkirch B2, se nw ne 9-18n-1w	73	3670
Strohkirch 9, sw ne ne 9-18n-1w	63	3668
Rex Oil Co., Ruck B2, nw nw sw 26-18n-1w	40	3598
Bell-Mark, Schember 3, sw nw nw 26-18n-1w	250	3608
Victory Pet. Co., Maier 2, nw se nw 35-18n-1w	*	3702
Isabella County—		
Pure, Latham 7, sw ne se 33-15n-6w	70	3656
James Pierce, Arnold 1, c w sw 5-16n-3w	*	1330
Mecosta County—		
Mitchell Oil Co., Blodgett 1, c se se 22-13n-10w	*	3465
Ogemaw County—		
Muskegon Oil Co., Barber 3, sw se nw 28-22n-2e	100	2703

*Failures; †Junked; ¶Million cu. ft. gas.

Happy About the Whole Thing



This group, operating as S. J. Higelmire, Trustee, with their initial venture as oil drillers, drilled a wildcat producer in Freeman Township of Clare County, Michigan, to start what promises to be an extensive drilling campaign. They are: Back row, left to right: George Scott, filling station operator; Mark Bicknell, banker; John W. Dunlop, restaurant owner. Front row: L. R. Perkins, resort owner; S. J. Higelmire, osteopath, and Donald Holbrook, Clare County prosecuting attorney.

on a dry hole basis for the test. This company has a 180-acre lease offsetting the discovery on the south and upwards of 3000 acres within less than a 3-mile radius. Carter Oil Company, Socony-Vacuum Oil Company, Cities Service Oil Company and Gulf Refining Company are the leading holders of big spreads among the majors. McClanahan Oil Company, Gordon Oil Company, Wicklund Development Company and C. W. Teater lead among the independents with "hot acreage."

Bringing of the wildcat into production and the predominance of major company acreage already has started brisk dealing. Previously Carter and Cities Service had farmed out its acreage for development. Pure, Gulf and Socony-Vacuum are expected to drill their own leases. If the well leads to a major field it will represent the first time that Socony-Vacuum has had a substantial drilling play in Michigan. Socony has the north offsetting 80-acre lease; Gulf the east 40, and the Higelmire trusteeship the west 40.

Simrall Pipe Line Corporation, which closed purchase rights on the discovery well production the day following completion, installed temporary truck loading racks and is hauling to Temple, 3½ miles, and delivering to tank cars. Simrall's Mount Pleasant-Gladwin 6-inch line could be reached by about 18 miles of cross country construction.

Two rigs were moved into the district 2 days after the discovery was brought into production. Wicklund Development Company started a rig 1½ miles west, and C. E. Weller put a rig on a 20-acre farm-out from Sloan & Zook, ½ mile northwest of the discovery.

Excitement in the industry as a result of the Clare County oil strike, first commercial production from a deep lime zone in the county, all but obscured another wildcat development which may have important bearing on future development. C. W. Teater's Gray 1, NE SW SW Section 32-23n-5w, Enterprise Township, Missaukee County, logged 4,700,000 cubic feet of gas in Michigan Stray reportedly between 1085-1102 feet. Drilling will be continued for a Dundee-Monroe lime test.

Sun Oil Company may acidize State B1, Section 9-15n-1w, Jerome Township, Midland County, deep test, where from a half to one barrel of oil per day has been recovered from the Detroit River series of the Monroe limestone at 4759 feet.

New Mexico Fields

Announce 11 new starts in Lea County drilling revival.

Failure indicated in wildcat southeast of Lovington.

Hobbs, N. M.—Lea County accounted for 11 new operations the past week, with 8 of the projects assigned to the sandy-lime belt in the east portion of the county, where necessary offsets have been held in abeyance. Independents participate in only 2 of the new tests.

The Texas Company has been a large contributor to the revived drilling program in the county in recent weeks. This concern is the most active, having 9 contract rigs in service, and is starting operations on 3 new projects, including Black 4, C SE NW 21-24s-37e, and Fanning 2, C NW NE 4-24s-37e, both in the Mattix area. Derrick is up for Falby 4, C SE NW 8-22s-37e, Penrose field.

Magnolia Petroleum Company listed 2 completions in the Vacuum field, and shifted the company-manned rigs to drill State-Bridges 13, C SW NW 25-17s-34e, and State-Bridges 14, C SW NE 25-17s-34e. Both will require progressive offsets. This company's State-Bridges 9, C SE SW 17-17s-34e, near north end of production, flowed 72 barrels of oil in 18 hours through choke after treating lime at 4682 feet with 1000 gallons of acid under 1750 pounds pressure. State-Bridges 10, C SE NW 23-17s-34e, offsetting production in a sector with a record for erratic production performance, flowed 65 barrels per hour average for 3 hours natural when tested through tubing at 4676 feet.

The Texas Company's State 2-D, west outpost of the Vacuum field, passed up free oil in the hole at the regular pay level, and was coring lime at 4792 feet, with an elevation of 4054 feet. The test may be drilled to the water level, then plugged back for a nitro shot.

Low structural position registered by Continental Oil Company and Herschbach Drilling Company's State 1-K, C SW SW 29-16s-37e, wildcat situated 6 miles southeast of Lovington, in drilling to 4700 feet, points to the completion of a dry hole. Base of salt series was called at 3340 feet, with an elevation of 3817 feet.

Repollo Oil Company's Whitten 5-B, offsetting production in the Cooper area, encountered tight lime condition in the oil horizon, and is credited with 2000 feet oil in hole while removing bridge formed after 60-quart nitro shot at 3571-3631 feet. The hole was plugged back from sulphur water at 3689-3725 feet to 3639 feet.

Three additional operations assigned the Penrose field include Olean Petroleum Company's Farrell 1, C NE SE 22-22s-37e, involving an original farmout by Humble Oil & Refining Company. Twin Oil Corporation's Corrigan 2, C NE NE 4-22s-37e, involving 80 acres farmed out by Amerada Petroleum Corporation, was drilling at 1135 feet. Cities Service Oil Company et al's Brunson 3, C SW SE 4-22s-37e, was drilling below surface pipe. Gulf Oil Corporation's Mattern 1-E, C NW SW 1-22s-36e, has rigged up to drill a short-term lease between the Penrose and Eunice areas. Shell Petroleum Corporation's State 3-H, SE NE 13-21s-35e, is a new test for the west flank of the Eunice lime field. In the Langlie area, Stanolind Oil & Gas Company has made location for Langlie 4-B, C NW SW 14-25s-37e.

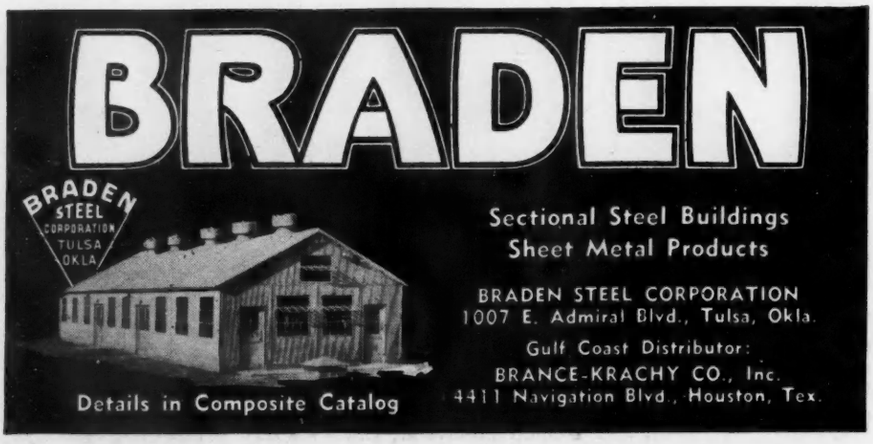
NEW MEXICO Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Eddy County—		
Danciger, Turner 4-A, c sw sw 18-17s-31e	225	3522
Lea County (Eunice)—		
Shell, State-Endura 2-C, ne se ne 24-21s-35e	312	3926
Lea County (Monument)—		
Two States Oil Co., P. Etcheverry-Gulf 2, ne nw se 10-20s-36e	75	3886
Lea County (Penrose)—		
Street et al, Farrell-Humble 2, c nw se 22-22s-37e	108	3689
Lea County (Vacuum)—		
Magnolia, State-Bridges 10, c se nw 23-17s-34e	1200	4676
Republic Prod. Co., State 1, c nw sw 32-17s-35e	744	4525

*Failures; †Junked; ¶Million cu. ft. gas.

Wellsville, N. Y.—The Frost oil property in the town of Clarksville, Allegany County, New York, has been leased on a one fourth royalty basis by Carroll D. Miller, Overbrook, Pennsylvania, and Harold Duke, Mark Hyslip, Sr., Mark Hyslip, Jr., and Edward Schultheis, all of Wellsville. The property consists of 76 acres with 17 producing wells. The new owners will drill 10 additional wells this year.

South Penn Oil Company employes in the Oil City district will hold their annual outing and picnic at Hasson Park on July 30. General chairman of the event, which will be an all-day affair, is B. H. Spence, of Pleasantville.



America's Finest Boiler Gauge Cock
(INFERNO)

Guaranteed never to break or twist off in your boiler—shank of 18-8 Stainless Forged Steel. Reversible seat disc, large enough to deflect steam, preventing burns. For a new seat, lift the heavy handle and turn. Note grease connection for easy lubrication of revolving handle and disc.

Standard equipment on one well known boiler. Available on any new boiler, and a highly desirable replacement on any boiler now in use. Your supply store has it, or can get one quickly.

Bulletin No. 9 gives further interesting details

THE INFERNO CO.

"Makers of Better Steam Equipment"

P. O. Box 1138 Shreveport, La.

INFERNO Field Men Everywhere

TRUE HOSPITALITY
in
NEW ORLEANS

"like walking into your own home" that's what people say about Hotel Chalmette just a few blocks from historic Canal Street and close to every feature of interest in New Orleans. Every comfort and luxury at moderate cost

ROOMS WITH BATH
SINGLE $1.75
DOUBLE $2.75

800 CARONDELET STREET

HOTEL CHALMETTE

GARLOCK *Bitan* LEATHER PACKINGS

1 Leather Cups
2 Flange or Hat Packings
3 Washers, Discs or Gaskets
4 "U" and "V" Packings

For Severe Service

Through special tanning and treating of selected raw leather by an exclusive process, GARLOCK brings you *Bitan* Leather Packings—properly treated to operate successfully against extreme pressures and severe service conditions.

Bitan Leather Packings are resistant to heat, acids, alkaline solutions, etc. The proper tannage and treatment to suit the particular service is used in filling each order.

Garlock *Bitan*, Oak or Chrome Leather Packings are produced in all forms and sizes. One of these materials is suitable for every leather packing requirement. Write for descriptive folder.

THE GARLOCK PACKING CO.
PALMYRA, NEW YORK
Tulsa, Oklahoma Los Angeles, Calif.
Houston, Texas

GARLOCK

IMPORTANT WILDCAT TESTS

ALABAMA

Barbour—H. A. Stebbinger's Mrs. Alyce Robertson 1, ne ne 19-10-26 (amended lcn), mim. **Choctaw**—Joe Modisett et al's McCorvey 1, se sw sw 20-9n-2w, temp abn 7520 ft. **Greene**—R. T. Jeffrey et al's R. C. Lett 1, 3-20n-2e (120 ft e Willis & Payne's), dr 700 ft (no recent report). **Mobile**—J. C. Prince's King 2, 1120 ft s and 700 ft w sec 4-1n-4w, elev 134 ft, sd 1160 ft. Grand Bayou O. & G. Co.'s J. A. Stafford 1, sw sw 24-7s-3w, ru & sd.

ARKANSAS

Calhoun—C. E. Murdock's Southern Kraft 1, se nw nw 17-14-13, spd & sd. **Crittenden**—Stanley Oil Corp.'s D'Annar Hrs. 1, c 18-8n-9e, top paleozoic 3243 ft, sd 3331 ft. **Cleveland**—W. E. Allaun Tr.'s Moore Est. 1, sw se nw 34-9-10, rur. **Clay**—Canadian American Oil Co.'s Smith 1, c ne nw 9-20-8, elev 375 ft, top Nacatoch 800 ft, sd 1005 ft shale. **Craighead**—Tenn. Ark. Inc.'s Ruby Martin 1, ne ne 35-14n-3e, dr 1670 ft rock. **Columbia**—J. A. Longino's Baker 1, se nw nw 13-17-20, mim. Green Smitherman et al's Mary Dennis 1, nw se sw 4-17-21, owdd, td 4513 ft. G. H. Vaughn & Shell's Garrett 1, c ne se 12-17-20, rur. Wade Parker 1, c ne sw 14-17-20, lcn. Standard of La.'s Tina Crumpler 1, c sw nw 15-17-19, top chalk 2391 ft, 9⅝-in csg 2408 ft, dr 5564 hd white sand. Harris Unit 1, c ne sw 15-17-19, dk & mir. Fohs Oil Co.'s Phillips 1, nw nw sw 15-17-19, dr 5876 ft, Cotton Valley red beds. Atlantic Ref. Co.'s M. Talley 1 (Harrington 1), c sw nw 14-17-20, rur. M. Talley 2, nw sw 14-17-20, lcn. Baker 1, 2, 3 and 4, se ne sw ne, sw nw, nw ne 14-17-20, lcns. Phillips' Turk 1, nw ne 14-17-20, lcn. Johnson—Ark.-La. Gas Co.'s Hudson 2, se nw 14-10-24, completed 40 mil ft gas, rock pressure 1300 lbs, td 3401 ft. **LaFayette**—Standard of La.'s Warren 1, c ne ne 18-16-22, top Nacatosh 1418 ft, top anhydrite 3279 ft, dr 5359 ft shale. J. P. McKean 3, se ne se 7-16-22, spd dr 3067 ft shale. **Little River**—J. G. Strahan's Dierks Lbr. Co. 2, sw se 21-12-28, elev 268 ft, owdd, top lime 2421 ft, sd 3030 ft. **Lonoke**—J. W. Eddington et al's Anderson 1, nw ne 7-4-9, 12-in csg 85 ft, sd 600 ft. Cabot Drlg. Co.'s Benson 1 (Cabot townsite lcn), sd 1815 ft. J. E. Russell's Gunter 1, se se 17-5s-10w, dr 1270 ft. **Miller**—F. F. Earles' General American 1, se sw 20-14-26, sd 1232 ft. Ray L. Estabrook et al's E. L. Sherman 1, sw sw 29-19-28, dr 2564 ft. **Nevada**—Texas Canadian Oil Co.'s Stocks 1, nw sw se 9-15-22, lcn. Pelt 1, ne se 8-15-22, lcn. **Pulaski**—Coker Oil Corp.'s M. S. Stone 1, sw ne se 36-3n-11w, 12½-in csg 108 ft. **Union**—Joe Modisett et al's Frost Lbr. Co. 1, ne ne 8-18-12, 9⅝-in csg 3307 ft, woc td 3350 ft.

CALIFORNIA

Los Angeles County: Bellflower—George L. Clayton's Scott 1, 32-3-12, sd 6897 ft. **Castaic**—Royal Land's No. 1, 8-4-17, dr hard shale 935 ft. **La Mirada**—John McKeon's Carmenita 1, 21-3-11, dr hard brown shale 5808 ft. **Lomita**—Insco's No. 1, 30-4-13, rur. **Newhall**—National Petroleum's No. 1, 27-4-16, sd 2436 ft. Palmluck's No. 1, 23-3-16, sd 25 ft. **Palos Verdes**—Rolling Hills' Weston 1, 27-4-14, repairing boilers, to deepen 4250 ft. **Pico**—British American's Pico 1, 12-2-12, sd 4568 ft. **Redondo**—Clifton's No. 1, 17-4-14, bailing 5500 ft. **San Fernando**—Tide Water Associated's Porter 1, 27-3-16, dr sand and shale, 1083 ft. **Whittier**—Security Land's No. 1, 8-2-11, standing cemented 1550 ft. **Orange: Costa Mesa**—A. V. Oil's No. 1, 16-6-10, dr hard brown shale 3675 ft. **Kraemer**—Congress' Kraemer 1, 36-3-9, bailing 3014 ft. **San Bernardino: Chino**—Southern Counties' Los Serranos 1, 22-2-8, dr hard shale 410 ft. **Fresno: Clovis**—Central Valley's No. 1, 1-12-20, clay 556 ft. **Coalinga**—Amity's No. 10, 1-20-14, pumping, no estimate, 670 ft. Petroleum Securities' Grimes 1, 12-20-15, sd 514 ft. Same, 7-20-16, No. 7-7F, lcn. **Magnet's Fearon 2**, 18-20-15, standing cemented 2780 ft. Medford's Goetz 1, 10-20-15, rur. Standard's 13 Fee 1, 13-20-15, lcn. Superior's Hight 1, 8-20-16, foundation. Texas Co.'s Mohawk 19, 12-20-15, rur. Tidewater Associated's Guardian 33, 12-20-15, rur. Universal Consolidated's Leavitt-Hintze 1, 12-20-15, dr sand and shale 2000 ft. **East Coalinga**—Pure's SPL Co. 1, 31-18-17, redrilling 10,688, td 10,861 ft. **Jacalitos Hills**—Jacalitos Petroleum's No. 1, 14-21-15, redrilling 5725 ft, td 5743 ft. Dauphin Development's Boone 1, 30-21-14, bailing water 3780 ft. Same, No. 1, 19-21-14, foundation. **Panoche Hills**—Panoche Hills' No. 3, 12-14-11, sd 300 ft. **Kern: Arvin**—Petrex's Petrex 1, 32-31-30, sd 5240 ft. Union's Berry 1, 15-31-29, pulling rods, 6812 ft. **Belridge**—F. E. Abbott's No. 1, 18-27-19, rig. General Petroleum's St. Helens 1, 12-28-20, pumping 10 bbls daily 8683 ft. Shell's Voight 1, 32-27-20, repairing rig 790 ft. **Buna Vista Lake**—Ohio's KCL A8, 32-31-26, swabbed water and will reperforate 11-186 ft. **Devils Den**—Amerada Petroleum's Beer 5, 22-26-19, abd 8298 ft. Gibson's Alferitz 3, 14-25-18, dr shale 600 ft. George Goodrum's Baron 1, 24-25-18, sd 1210 ft. H. L. F. Oil's No. 1, 25-25-18, sd 88 ft. **Dominion**—Master Petroleum's U. S. 1, 34-26-28, grade. **Edison**—Ray W. Stevens' No. 1, 22-30-30, dr sand and gravel 900 ft. **Elk Hills**—Richfield's KCL-Western 1, 32-30-25, building roads. **Fruitvale**—Texas Co.'s Camp-West-Lowe 1, 7-29-27, coring shale 6834 ft. Continental's KCL B-2, 12-29-26, dr sand and sandy shale 4000 ft. **Grapevine-Wheeler Ridge**—Petrol's Reserve-Petrol 33-5, 33-11-19, so & g, swabbing 4607 ft. Richfield's KCL 1, 28-11-20, dr hard brown shale 4765 ft. Wilshire's Tejon 34-1, 34-11-19, rur. **Lerdo**—Standard's KCL 18-1, 29-28-26, dr hard shale 9785 ft. **McFarland**—Tide Water Associated's Pond 1, 17-26-25, dr sand and shale 6985 ft. Shell's KCL 83-35, 35-26-25, dr sand and shale 9119 ft. **McVan**—Bargol's Claflin 2, 10-27-27, sd 2169 ft. Desert Glow's No. 3, 14-27-27, rig. Framac's Brown 3, 22-27-27, standing cemented 1355 ft. **Poso Creek**—Harkness & Laws' Hunt 1, 28-27-27, foundation. Reynolds' No. 1, 30-27-27, sd 2854 ft. **Richgrove**—Dilamar's Quinn 1, 15-25-27, cement squeeze job 2956 ft. **San Emigdio**—Shell's KCL 1A4, 26-11-22, redrilling 9571 ft, td 9824 ft. **Strand**—Continental's KCL E-1, 17-30-26, sd 8574 ft. **Temblor Hills**—Chico Martinez's Holly 1, 1-29-20, pumped 50 bbls daily 1108 ft. **Wasco-Semitropic**—Continental's KCL A-3-8, 8-27-24, dr shale 10,250 ft. Same, Seaboard-Associated's KCL C-1, 7-27-24, dr sandy shale 12,650 ft. Standard's Mushrush 1, 7-27-24, dr sandy shale 7000 ft. Same, KCL 8-B-1, 17-27-24, dr sand and shale 8825 ft. **Kings: Dudley Ridge**—Falcon Oil's Josephine 2, 24-23-20, sd 6499 ft. **Pyramid Hills**—Pyramid Production's Retherford 1, 27-24-18, sd 3090 ft. **Tulare: Alpaugh**—Sullivan & Youngdahl's No. 1, 33-23-23, sd 2732 ft. **Ducor**—Nelson & Davison's Muller 1, 1-24-27, sd 378 ft. **Trico—Caminol's** A. O. G. 3, 29-24-24, rur 7555 ft. **Santa Barbara: Carpinteria**—Carpinteria's No. 1, 32-4-25, straightening hole 2429 ft. **Correaga**—Douglas-Stratton's No. 1, 8-8-33, standing cemented 6058 ft. **Casmalia-Cat Canyon**—Standard's Los Flores 1, 27-9-33, dr hard broken shale, oil in fractures 5759 ft. **Coal Oil Point**—South Crude's Permit 191-2, 24-4-29, r 5510 ft. **Gaviota**—Gaviota Oil's Hollister 1, 35-5-33, pumping water with scum of oil, 3215 ft. Wilshire's Hollister 1, 35-5-33, new tests slated 4600 ft.
Gato Ridge—Barnsdall's Magenheimer 5, 9-8-32, rig. Same, Tognazzini 3, 9-8-32, dr brown shale 3625 ft. Petrol's Magenheimer 11, 9-8-32, lcn. **Lompoc**—J. E. O'Donnell's Helen 1, 8-7-33, sd 3580 ft. **Los Olivos**—United Western's Bradley 1, 15-7-30, sd 3279 ft. **Orcutt**—Warren Deuel's Garrett 1, 12-9-34, rig. **San Luis Obispo: Elkhorn**—California Petroleum's Job 1, 6-10-24, dr gray sand and shale 1960 ft. Western Plains' Bell 1, 7-31-21, sd 4010 ft. Same, Bell 2, 2-32-21, sd 2620 ft. **Edna**—Loma Grande's Luis 1, 28-31-13, rig. **Huasna**—Hancock's Scherer-Dickes 1, 30-12-33, dr hard shale showing oil in fractures 4490 ft. **Pismo**—Fred Roberts' Scott 1, 5-32-13, repairing rig 4624 ft. **Ventura: Moorepark**—Darby's A. B. Cohn 1, 7-2-19, sd 3630 ft. **Oxnard**—Walter G. Rowe's L. Johnson 1, 15-1-22, sd 4705 ft. Ojai—High Mesa's Butcher 1, 16-4-22, fsg bailer 1710 ft. Holly Development's Macrate 1, 27-4-23, dr hard shale 2109 ft. St. Louis' Pirie 1, 18-4-22, pumped 10 bbls daily 2710 ft. **Sespe**—Claran's Hardison 1, 22-4-20, sd 410 ft. Esbro's Metro-Grande 10, 6-4-19, rigging pump 2612 ft. Garmack's Orcutt 1, 28-5-19, sd 565 ft. La Salle & VanDissen's No. 1, 17-5-19, grade. H. A. & Craig McDonald's No. 1, 5-5-19, lcn. Charles R. McKinnis' Cosley 1, 14-4-19, dr sand 165 ft. Merchants' Cochrane 8, 1-4-20, dr shale 685 ft. St. Louis' Williamson 1, 1-4-20, co 420 ft. Sespe's No. 1, 1-4-20, sd 2650 ft. Speik's Speik 1, 33-5-19, sd 3440 ft. George Terry's No. 1, 23-5-20, sd 1340 ft. **South Mountain**—Albatross' Scheiferle 1, 17-3-20, rig. Clipper's Calco 1, 17-3-20, rig. Texas Co.'s Yale Richardson 5, 13-3-21, dr hard sand 6125 ft. **Tar Creek**—Section 20 Oil's No. 1, 20-5-19, r 1690 ft. **Timber Canyon**—J. W. Martin's Arnett 1, 15-4-21, dr hard shale 1215 ft. Stallings, Senter & Ahlburg's Stallings 1, 24-4-21, dr sand and shale 1300 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
bs—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg—*fishing.*
ft—*feet*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so&g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

FLORIDA

Levy—Fla. Oil Discovery Co.'s Sholtz 2, sw sw ne 9-15s-13e, dr 3266 ft chalky limestone, strks blue shale. **Nassau**—St. Mary's River Oil Corp.'s Hilliard Turpentine Co. 1, nw nw se 19-4n-24e, elev 110 ft, 6⅝-in csg 3935 ft, dr 4510 ft last report. **Polk**—Edw. A. Hill's Polk County Lbr. Co. 1, nw nw ne 32-25s-25e, dk. **Suwannee**—Wm. G. Blanchard's Lucy Cotton 1, se ne 35-3s-11e, elev 70 ft, sd for heavier rig, td 200 ft. J. W. Phillips Oil Explorations' Shilkett 1, nw nw 14-4s-14e, dk.

KANSAS

Barton—Day et al's Fletes 1, se ne 14-16-12w, abd 1875 ft. Gardner et al's Drug 1, sw se 16-16-13, dr 900 ft. Armer et al's Seyfert 1, nw sw ne 3-17-13w, comp 282 bbls 3399 ft. Crown's Wolfe 1, se sw se 36-19-12w, woc td 3237 ft. Byers' Weathers 1, sw ne 35-20-14w, lcn. **Butler**—Simpson's Equitable Life 1, swc 15-25-3e, ru. Steinbuchel et al's Fox 1, nw se ne 25-26-13e, dr 2800 ft. Rex et al's Newby 1, sw se 16-26-6e, sd 2340 ft. Duston's Miley 1, se nw ne 17-27-5e, show gas td 2008 ft, sd. Phillips & Henshaw 1, ne ne se 32-27-5e, lcn. National's Wentz 1, se ne nw 7-27-6e, dr 500 ft. Seidhoff's Eckel 1, sec 17-27-7e, rig. Solomon's Sawyer 1, sw nw sw 2-28-7e, ru. Heilman et al's Sawyer 1, se ne ne 10-28-7e, dr 2885 ft. Pryor & Lockhart's Lietzke 1, nw sw nw 24-28-7e, ru. **Cowley**—Smith et al's Wilson 1, se sw nw 9-33-6e, shot 3100-10 ft co. Milton et al's Hunt 1, sw ne 16-34-5e, spd and sd. **Ellis**—Carter's Gottschalk 1, nw se 36-15-18w, dr 410 ft. **Ford**—Sinclair Prairie's Young 1, c sl ne 34-27-21w, 7-in csg set 4886 ft, dr plug. **Greenwood**—Nichols et al's Central Life 1, se sw 35-25-12e, ru. Fullerton et al's Bates 1, ne sw se 32-26-11e, ru. Whittaker et al's Bressner 1, nw se 8-26-13e, abd 1496 ft. Smalley et al's Samples 1, se nw ne 15-26-13e, dr 1515 ft. **Graham**—Schlemeyer et al's Belveal 1, c se nw 3-8-24w, dr 735 ft. **Kingman**—Bunte's Shepard 1, se se se 10-27-10w, ru.

OIL BOOKS

The knowledge gained through years of work and study by some of the most capable men in the oil industry is set down in the various oil books published and sold by the Gulf Publishing Company. Catalog of these books furnished upon request.

THE GULF PUBLISHING COMPANY
P. O. BOX 2811 **HOUSTON, TEXAS**

Marion—Progressive's Evans 1, se sw se 33-22-3e, lcn. **Lane**—Phillips' Kees 1, c se se 3-19-30w, abd 4911 ft. **Ness**—Mid-Continent's Collins 1, swc 24-20-26w, dr 2910 ft. **Ottawa**—Babcock's Copeman 1, c nw ne 13-10-2w, fsg 432 ft. **Pottawatomie**—Turner et al's Unshide 1, c ne nw 32-8-9e, lcn. **Pratt**—Tide Water's Jarboe 1, c ne se 25-26-14w, dr 4460 ft. **Riley**—Coronado et al's Parks 1, se se 16-10-8e, dr 1425 ft. **Rooks**—Power et al's Hammond 1, c sw 34-6-19w, rig. Haines et al's Dorr 1, se sw 13-9-16w, dr 1825 ft. Hall's Kruse 1, se ne 3-10-16w, ur td 3077 ft. Elwell et al's Bar 1, se nw 34-10-19w, lcn. **Russell**—Smith et al's Stielow 1, nw nw 32-11-14w, sd 2552 ft. Phillips' Miller 1, c nw sw 29-13-14w, dr plug show oil td 3311 ft, Coralena's Hefferman 1, ne se sw 34-14-13w, co td 2926 ft. Aylward's Solbach 1, se ne 31-14-14w, dr 2777 ft. Hinkle et al's Kaufman 1, se nw 19-15-12w, rig. Shields' Rogg 1, c el w nw 9-15-13w, dr 2175 ft. **Sedgwick**—Hutton's Phillips 1, nw ne nw 14-26-1w, mim. National's Trustee 1, se ne 8-27-2e, ur td 2954 ft. Hudson et al's Fulton 1, ne se 35-28-1e, sd 2283 ft. **Stafford**—Cities Service Smith 1-B, c wl sw 16-21-11w, dr 1010 ft. Western Kansas' Barnes 1, nwc 8-21-12w, dr 2650 ft. Boone et al's Schilling 1, nw ne 20-21-12w, cellar. Atlantic's Wise 1, nwc 13-24-14w, spd. Austin's Slade 1, ne nw 35-25-12w, sd 3870 ft. **Sumner**—Hapenney et al's Evers 1, se ne 27-31-2e, woc 2030 ft. **Woodson**—Trott's O'Neal 1, sec 21-25-14e, dr 1475 ft. Steinbuchel's States 1, nw ne nw 15-26-14e, co 1150 ft.

NORTH LOUISIANA

Bienville—DeSoto O. & G. Co.'s Wm. Ashley 3, c nw se 15-16n-10w, rog. Mrs. B. A. Fleming 1, nw nw 18-16n-9w, spd dr 400 ft. Gulf's Goodpine Oil Co. 1, se sw 25-14n-8w, elev 157 ft, massive anhydrite 5303-5420 ft, top lower Marine 9650 ft, dr 10,909 ft gray sandy shale. **Bossier**—Lloyd & Sloan's B. A. Sherrill 1, se se 12-19n-12w, sd 785 ft. **Caddo**—R. E. Allison et al's Ellerbe et al 1, sw nw 27-18n-14w, elev 173 ft, 13⅜-in csg 229 ft, 9⅝-in csg 2048 ft, top red beds 2448 ft, top anhydrite stringer 4070 ft, massive anhydrite 4332-4610 ft, cemtd 7-in csg on bottom at 6025 ft, perf with 21 shots 5840-60 ft, showed sw, pb to 5840 to re-perf. Oils, Inc.'s A. Cazaux 1, sw sw 16-16n-13w, 10-in csg 300 ft, sd 1400 ft shale. Hutchinson Bros.' Fee 2, 3-12n-15w, dr 1397 ft chalk. **Caldwell**—Oakes et al's Kyles 1, sw ne 18-11n-3e, woc 470 ft. **Catahoula**—G. E. Foster et al's W. S. Peck 1, c s½ 39-10n-8e, sd 620 ft. **Claiborne**—E. T. Oakes et al's Kilgore 1, ne se 28-21n-5w, elev 288 ft, 5⅜-in csg 5290 ft, logged saturated lime 5297-5305 ft, and 5307-12 ft, swabbing sg & so, td 5357 ft. Union Prod. Co. et al's Rufus Sims A-1, sw sw 29-20n-5w, dr 5075 ft lime & shale. J. N. Buchanan's Miller Est. 1, ne sw 11-20n-8w, rur. **DeSoto**—S. S. Alexander's Stell 1, ne ne 5-12n-16w, elev 245.6 ft, perf csg 5150-5440 ft, flowed est 50-60 bbls oil day, pb to 4110 ft, perf 4100 ft, tested so, arr dr new hole, old td 6002 ft. Fuqua & Gay's Frost Lbr. Co. 1, 25-11n-15w, mir. S. P. Taylor's Barnhart 1, ne se 20-14n-12w, mim. M. L. Stephens' M. E. Garrett 1, nw ne 10-11n-16w, mim. La. Seaboard's Lawrence 1, sw ne 36-12n-14w, elev 332 ft, tested so 2062 ft, tested dry 2822 ft, arr deepen. G. H. Collins et al's Joyner 2, sw ne 28-11n-12w, dr 2710 ft (70 ft from No. 1). **Grant**—C. L. Thompson et al's Woodward 1, ne sw 10-6n-3w, top Wilcox 2867 ft, install heavier rig, td 4527 ft, sandy shale. C. R. Bowers et al's Harrison 1, ne sw 21-8n-5w, dr 750 ft. **Madison**—Continental Oil Co.'s Singer Mfg. Co. 1, n½ ne nw 3-15n-11e, sd 1740 ft. **Morehouse**—Hunter & Rowe's E. M. Clarke 1, sw ne 10-20n-7e, elev 103 ft, top lime 6218 ft, temp abn td 7022 ft. **Natchitoches**—Jos. E. Popkins' Peavy-Wilson 1, nw nw 36-7n-9w, sd 300 ft. W. T. Ryan et al's Lambert 1, nw nw 4-8n-9w, sd 4189 ft. Raines Bros.' Allen Plantation 1, ne sw 22-10n-9w, fsg 1250 ft. **Rapides**—J. J. Farrell's Ceetner 1, nw se 16-4n-1e, dk. E. F. Kalb et al's Lee Lbr. Co. 1, nw sw 9-5n-3e, dk & mir. Texas Co.'s Well 3, 53-1s-2e, sd 8565 ft. **Red River**—Glassell & Whitehurst's LeLong 1, ne nw ne 25-12n-11w, sd 3113 ft. W. J. Hunter's Long-Bell 4, se se 19-13n-9w, spd dr 500 ft. **Sabine**—W. L. McClanahan et al's Frost-Johnson 1, se ne sw 22-9n-13w, elev 196.2 ft, top Nacatoch 1531 ft, top Saratoga chalk 1578 ft, Annona chalk 1816-2041 ft, Austin chalk 2854-3007 ft, top Glen Rose 3286 ft, blew out gas & so 4745 ft, killed, cored 4745-50 ft hd shale strks lime, arr run electrical tester. H. M. Sneed et al's Loene 1, nw se 8-7n-13w, rur. J. G. Sutton-Zwolle Oil Co.'s Bowman-Hicks 1, w½ sw se 14-7n-14w, spd. Bowman-Hicks 2, w½ sw nw 24-7n-13w, lcn. Albert Reich et al's Glaque 1, ne se ne 27-7n-14w, core 3898 ft. F. W. Martin & Co.'s Sabine 2, c e½ ne ne 23-7n-14w, lcn. Lee Whitehurst et al's Bowman-Hicks 1, se se 14-7n-14w, top nw nw 19-7n-13w, dr 4308 ft, hd lime, strks chalk 2105 ft, completed 50 bbls oil, 500 bbls sw, td 2410 ft. A. Boykin King's Sabine 1, c nw nw 19-7n-13w, dr 4308 ft, hd lime, strks shale. Sabine 1-A, c w½ nw nw 19-7n-13w, lcn. Sabine 2, c sw nw 19-7n-13w, lcn. Zwolle Synd.'s (L. M. Moffitt et al), Mansfield Hdw. Lbr. Co. 1, ne ne 8-7n-14w, spd. Quality Prod. Co.'s Long-Bell 1, se se 5-8n-13w, spd. **Union**—Joe Modisett et al's Frost Lbr. Co. 1, ne sw 14-21n-1e, elev 188 ft, top lower Marine 6161 ft, top pink anhydrite 9060 ft, top Permian lime 9612 ft, dr 9961 ft, fine hd sand. Standard of La.'s Frost Lbr. Co. 1, c sw sw 13-23n-2w, lcn. **Webster**—W. M. Chambers' Thomas 1, se se 11-22n-11w, rur. Magnolia's Pardee Co. 1, ne nw ne 17-23n-11w, dr 2896 ft. H. M. Branton 1, ne ne 6-22n-9w, rur.

SOUTH LOUISIANA

Calcasieu—Union Sulphur's Drew Mineral 1, s of Edgerly, 4-10s-11w, dr shale 8000 ft. **Cameron**—Humble's Katherine B. Hanszen 2, Chalkley, 9-12s-6w, dr shale 8854 ft. Pure's Calcasieu National Bank 1, n of Mallard Bay, 18-12s-4w, dr brittle shale 7428 ft. Republic's Sabine Tram Co. 1, Deweyville area, 25-8s-14w, tried to blow out at 9540 ft. **Iberia**—Texas Co.'s State 2-B, in Vermilion Bay, 16s-5e, capped 9667 ft. **Jefferson**—J. Szodomka's Carroll 1, n of New Orleans, 125-12s-11e, no report. **Jefferson Davis**—Continental's J. Sturdivant 1, South Roanoke, 36-10s-4w, dr shale 9963 ft. Union Sulphur's Liggett 1, Fenton area, 36-7s-5w, dr shale 5500 ft. **Lafourche**—Sun's Dibert, Stark & Brown 1, Chacahoula salt dome, 70-15s-15e, dr shale 4000 ft. Texas Co.'s La Terre 1, Golden Meadows, 1-20s-21e, dr hard sand below 7203 ft. **Orleans**—W. T. Burton's State 1, in Lake Ponchartrain, 10s-13e, no report. **Plaquemines**—Gulf's Grand Prairie Levee District 1-A, Bird Island, 6-20s-19e, comp 375 bbls daily at 6151 ft. **St. Bernard**—Gulf's State RR 3, Lake Borgne, 6-12s-15e, dr shale 10,268 ft. **St. James**—Continental's Colonial Sugar 1, Convent, 46-12s-5e, dr shale 6157 ft; same operator's Realty Operators 1, Convent, 17-12s-5e, fsh 7499 ft. **St. John the Baptist**—Shell's Godcheaux Sugar 1, La Place, 97-11s-7e, dr shale 5309 ft. **St. Martin**—Shell's Jeanerette Lbr. Co. 1, Lake Verrett, 14-14s-12e, dr shale 9868 ft. Texas Co.'s St. Martin Land Co. 11, Henderson, 21-8s-7e, dr shale 7889 ft; same operator's State 6, Lake Mongoulou, 10-10s-9e, shutting off salt water flow 800 ft. **Terrebonne**—Barnsdall's Barrow Estate 1, n of Bourg, 41-17s-18e, no report. Fohs' State 1, La Terre area, 41-19s-19e, preparing to test around 11,160 ft. Shell's Peters 1, se of Houma, 73-18s-18e, dr shale 8481 ft; same operator's Realty Operators C-1, Minor, 10-18s-16e, dr shale 9687 ft. Texas Co.'s Calliou Bay 1, n of Raccoon Point, 23s-14e, ru. **Vernon**—W. T. Burton's Gulf Lbr. Co. 1, Fullerton area, 32-1n-6w, dr shale 5651 ft.

MICHIGAN

Allegan—McIntosh's Shanz 1, 14-1n-14w, dr 1300 ft. Chulski's Tuttle 1, 22-3n-12w, Traverse 1720, so 1724, td 1729 ft, testing. Hubel Oil's MacVean 1, 19-2n-11w, dr 610 ft. Cline's Helmer 1, 36-4n-10w, dr 240 ft. Victory & Gordon's Wabecke 1, 11-4n-13w, so 1590, csg 6-in. **Arenac**—Tamblyn's McFarlan 1, 34-20n-3e, dr 740 ft. **Barry**—Associated's Natzel 1, 4-2n-9w, dr 1783 ft. **Cass**—Gordon Oil Co.'s Wright 1, 18-5s-13w, dr 900 ft. **Clare**—Gulf

COMPLETELY AIR-CONDITIONED
WORTH
AMAZING
COMFORT
Is yours at the WORTH
Be cool and comfortable when it's broiling outside. Enjoy the exact temperature you like best. At the WORTH you can be sure of supreme contentment and pleasure - - - - a distinctive and colorful atmosphere. You can get so much more for so much less.
IN FORT WORTH STOP AT THE—
WORTH HOTEL
JACK FARRELL • • • • MANAGER

Ref. Co.'s Ann Arbor 1, 21-18n-5w, dr 1990 ft. Clinton—McDonald's Koeppen 1, 19-6n-3w, rig. **Gladwin**—Smith Pet. Co.'s Nash 1, 28-20n-2w, sd 1450 ft. Brehm & Bond's Kitchen 1, 20-19n-1w, rig. **Gratiot**—Victory & Rex's Thum 1, 13-10n-4w, dr 1300 ft. Michigan Chemical Corp.'s Fee 9, 24-12n-3w, dr 3000 ft. **Huron**—Leonard Prospecting's Milling Co. 1, 10-16n-15e, sd 2100 ft. **Isabella**—C. W. Teater's Bellinger 1, 32-14n-5w, rust. Bell-Marks Inc.'s Moore 1, 8-13n-5w, dr 400 ft. Rowmord Corp.'s Weidman 1, 26-13n-5w, rig. Turner Pet.'s White 1, 28-16n-3w, dr 1100 ft. **Kalamazoo**—F. M. W. Oil Co.'s Glidden 1, 26-2s-12w, sd 1425 ft. **Kent**—Comstock Trustee's Donovan 1, 4-8n-9w, sd 2400 ft. **Mackinac**—Van Kuren's Hiawatha 2, 27-44n-9w, 8-in 153 ft, dr 350 ft. **Mecosta**—Daily Crude Oil Co.'s Thrush 1, 25-16n-7w, dr 250 ft. **Midland**—Sun Oil Co.'s State B-1, 9-15-1w, Dundee 3672, Monroe 3830, so & g 4642 ft, td 4649 ft, testing. **Missaukee**—Teater's Gray 1, 32-23n-5w, sg 1085 ft, dr 1290 ft. Moser Oil Co.'s Scherenhelm 1, 36-23n-7w, dr 1100 ft. **Monroe**—Sun Oil Co.'s Clampitt 1, 28-8s-6e, dr 1796 ft. **Montcalm**—Rex Oil Co.'s Hansen 1, 19-11n-8w, dr 200 ft. Taggart Brothers' Jacks 2, 7-12n-9w, wocs 6-in 1482 ft. **Osceola**—Champion Dev. Co.'s Ealy 1, 30-20n-8w, dr 380 ft. **Otsego**—Snow Trustee's Moore 1, 13-29n-2w, dr 550 ft. Barton's Yuill 1, 9-32n-3w, fsg 1402 ft. **Wexford**—Schrack's Fee 1, 17-22n-9w, Dundee 3740 ft, so 3888 ft, sd 3918 ft.

MISSISSIPPI

Calhoun—L. C. Lucas' B. C. Boland 1, sw sw 9-22n-9e, spd. S. & O. Properties Inc.'s G. C. Cooner 1, se ne 12-24n-8e, sd 2120 ft. **Claiborne**—Claiborne County Dev. Co.'s Ruth Hayden 1, s½ se 55-11n-2e, elev 199, owdd, rur to dd, td 2950 ft. **George**—Cleve Love et al's J. J. Newman Lbr. Co. 2, c sw 9-1s-8w, elev 111 ft, 10-in csg 1374 ft, top Het 1382 ft, sd 1400 ft. **Hinds**—Cleve Love et al's Montgomery 1, sw se se 28-6n-4w, lcn. S. F. Johnson 1, ne se 29-6n-1w, elev 343 ft, top black shale 3040 ft, top chalk 3097 ft, top Eutaw 3617 ft, top red beds 3657 ft, 7-in csg 3355 ft, sd 3707 ft. Progressive Realty Co. 1, se sw 35-6n-4w, top Wilcox 2750 ft, dr 6062 ft black shale. G. Jeffreys' Gaddis Farms Inc. 1, nw se 26-7n-4w, rur. **Lamar**—Southern Miss. Pet. Corp.'s Morris 1, nw se 4-2n-14w, elev 332 ft, top Het 1138 ft, 10-in csg 1144 ft, top Vicksburg 1615 ft, top Minden lime 2123 ft, top Wilcox 2735-53 ft, sd 3029 ft (Wilcox). **Montgomery**—Dr. T. A. Chichester et al's E. C. Mitchell 1, se nw sw 30-20n-7e, dk. **Pontotoc**—Waldrop, Melvin & Waldrop's Bray 1, sec n½ sw 17-11s-1e, set surf csg 166 ft. **Simpson**—Goodwill O. & G. Co.'s Berry 1, se sw 33-2n-4e, elev 307 ft, sd 2810 ft, gray gumbo. Cleve Love et al's N. E. Garner 1, sw ne 1-10n-17w, woc surf csg. **Yalabousha**—Acme Holding Co.'s Boyle 1, nw nw 33-25n-7e, dr 2010 ft sandy shale.

OKLAHOMA

Cleveland—Hollenbach et al's Mantooh, nwc 24-6n-1e, rig. **Comanche**—Midnite's Howe 1, nwc 20-2n-13w, sd 335 ft. **Coal**—Carter et al's Mote 1, c e½ sw nw 19-2n-9e, dr 4650 ft. **Garfield**—I. T. I. O.'s Kichin 1, c se se 17-22n-5w, dr 3800 ft. Champlin's Boehm 1, sw sw ne 4-24n-8w, sd 950 ft. **Grady**—Henry et al's Thomas 1, ne ne ne 9-5n-7w, lcn. **Hughes**—Amerada et al's Conard 1, ne nw sw 33-10n-10e, ru. **Jefferson**—Bridwell's Seay 1, se sw nw nw 29-6s-5w, dr 1325 ft. **Kingfisher**—Hollenbach et al's Zerger 1, c se sw 5-18n-6w, sd 205 ft. **Kiowa**—Hughes et al's Fultz 1, se se se 10-6n-18w, dr 1200 ft. Anderson Prichard's School Land 1, c se se se 14-6n-17w, show oil 1254 ft sd. **Lincoln**—Indian States' Bailey 1, nw nw se 2-12n-5e, dr 3340 ft. **Logan**—Superior's McCully 1, c w½ nw nw 26-16n-4w, dr 5960 ft. **Love**—Sinclair Prairie's Peabody 1, nec 35-6s-2w, fsg 2157 ft. **Noble**—Hollenbach et al's Mathews 1, c sw nw 9-20n-1e, woc td 210 ft. Big Chief's Hoy 1, se se sw 33-21n-2w, dr 3150 ft. Texas Canadian's Shultz 1, nec 29-33n-1w, dr 350 ft. **Oklahoma**—Fain et al's Little 1, sw sw ne 28-11n-3w, dr 2450 ft. Olson et al's Vaneck 1, se sw nw 4-12n-3w, dr 3190 ft. **Okmulgee**—Manahan's Kennedy 1, ne nw ne 31-14n-11e, dr 2650 ft. **Osage**—Norbla's Osage 2, sw sw se 30-22n-9e, sd repairs td 2296 ft. Wah-Sha-She's Osage 1, ne ne sw 4-28n-9e, sd 2100 ft. **Pontotoc**—Union's Abbott 1-A, sw nw ne 34-3n-6e, woc 2013 ft. Moore's Payne 1, se nw se 18-4n-4e, sd. Lynch et al's Parker 1, sw sw se 17-4n-8e, td 4572, pb 3960 sw sd. Pierce et al's Kroeger 1, se ne sw 30-5n-7e, rig. **Pottawatomie**—Farmers Mutual's Waite 1, ne ne nw 9-5n-9e, pb td 3234 ft. Farmers Mutual's School Land 1, se se nw 16-5n-5e, dr 1350 ft. Atlantic's McCurry 1, nw ne sw 6-6n-4e, dr 1760 ft. **Pawnee**—Sinclair Prairie's McQuain 1, ne nw ne 22-19n-1e, ru. **Roger Mills**—Central's Lamb 1, sec 27-14n-17w, rig. **Seminole**—Indian States' Johnson 1, ne se ne 20-6n-5e, sd 2850 ft. Pure's Lack 1, se sw nw 3-6n-5e, sd 4240 ft. Denver's Mathis 1, sw nw sw 7-6n-5e, may dd td 3842 ft. Southern's Rainey 1, nw ne se 12-7n-5e, dr 1600 ft. Simpson-Roodhouse's Fleet 1-A, nwc 27-7n-5e, rig. Southern's Van Meter 1, sw sw ne 2-7n-6e, spd. Young et al's Edgeman 1, sec 17-7n-6e, sd 3504 ft. Titus' Lehmar 1, c ne ne 26-11n-8e, dr 2300 ft. **Washita**—McWhirter's Fee 1, nw sw nw 34-8n-19w, woc td 2147 ft.

EAST TEXAS

Anderson—John G. Mayo et al's T. Royall-Davey 1, L. McCloud sur, Jarvis area, 12 mi e Palestine, elev 387 ft, top Pecan chalk 3425 ft, dr 3800 ft. **Angelina**—E. L. Kurth & K. L. McHenry's L. Henderson 1, Wm. White sur, 12 mi e Lufkin, elev 205 ft, top Pecan chalk 4976 ft, top Austin 6094 ft, dr 6193 ft. **Bowie**—King Oil Corp.'s Nanny Watts 1, (12-ac), G. Brinbee sur, 4 mi w Texarkana, elev 374 ft, massive anhydrite 3942-83 ft, top Hill 4193 ft, top Gloyd 4278 ft, top Dees 4451 ft, dry and abd 4574 ft. **Camp**—Wm. C. McGlothlin et al's Joe Venters 1, S. Wright sur, 2½ mi se Leesburg, elev 381 ft, Pecan chalk 2368-2815 ft, Austin chalk 3718-51 ft, top Woodbine series 4124 ft, top Georgetown 4550 ft, top Paluxy series 5623 ft, top sand 5680 ft, td 5710 ft, dry & abd. **Cherokee**—Bunn Drl. Co. et al's Callie Bounds 2 (95.9-ac), W. H. Walters sur, 2½ mi se Lone Star, elev 346 ft, dr 3410 ft. John G. Mayo et al's J. M. Travis 1 (640-ac), Thos. Quevado sur, 2 mi se Mount Selman, elev 456 ft, Pecan chalk 3370-3713 ft, top Austin chalk 4269 ft, dry & abd 4558 ft. **Dallas**—Mauldin Oil Co.'s W. E. Howell 1 (107-ac), S. Layton sur, 8 mi e Grapevine, sd 1650 ft. Plaza Oil Co-W. A. Brooks Jr.'s B. J. Davidson 1 (75-ac), John D. Merchant sur, base Woodbine 1970 ft, top Paluxy 2700 ft, sd 3528 ft. **Delta**—O. W. Killam et al's Delta Farming Assn. 1, J. Dollahite sur, 4 mi ne Sulphur Bluff, elev 348 ft, dd to Paluxy 3608-32 ft, dry & abd. **Franklin**—V. A. Hughes et al's W. E. Hayden-Shell 1 (88½-ac), W. Landrum sur, rig. **Gregg**—Humble & Gulf's E. D. Robertson 1 (11.4-ac), M. Mann sur, 4 mi e prod, elev 272 ft, top Georgetown 3341 ft, top Paluxy 4541 ft, 1st Glen Rose 4876 ft, 1st anhydrite stringer 5617 ft, massive anhydrite 6214-6532 ft, top Travis Peak 7325 ft, top lower Marine between 9600-30 ft, td 10,284 ft, cem 5½-in csg 9868 ft, pb to 7909 ft, gun-perforated 83 shots 7244-86 ft, initial 26 bbls distillate and 4,500,000 ft gas on ¼-in choke; Porter Horton et al 1, H. G. Hudson sur, Trinity test, rig. **Henderson**—High Point Oil Co.'s Dan Smith 1 (58-ac), F. Brown sur, Tool fault, elev 325 ft, Pecan chalk 1700-1829 ft, Austin chalk 2502-2995 ft, top Woodbine series 3400 ft, top sand 3409 to 3465 ft, dry & abd. Lignite Pet. Co.'s Tidmore 1, cem csg 437 ft. O'Byrne Bros. et al's J. E. Reese 1 (160-ac), G. Kimbro sur, Flag Lake area, elev 359 ft, rig. Peyton Bros. et al's Tarkington-Shell 1 (50-ac), W. K. Newell sur, Flag Lake area, elev 303 ft, Pecan chalk 1701-1850 ft, Austin chalk 2392-2855 ft, missed sand, dr 3695 ft; Carter-Tarkington 2, W. K. Newell sur, dk. Richards & Holloway's Tarkington Bros. 2 (15-ac), W. K. Newell sur, elev 324 ft, Pecan chalk 1782-2000 ft, Austin chalk 2140-2608 ft, top Woodbine series 3008 ft, top oil saturation 3056-62 ft, water sand 3072 ft, td, tested water. The Texas Co.'s I. A. Nolan 2 (280-ac), N. Parsons sur, elev 323 ft, Pecan chalk 1780-2000 ft, Austin chalk 2067-2612 ft, top Woodbine 3013 ft, oil sand 3058-66 ft, top water sand 3079½-3087 ft, tested water. **Houston**—Humble O. & R. Co.'s Dailey-Taylor 1 (500-ac), J. G. Thompson sur A-1021, top Woodbine 5801 ft, top sand 5827 ft, td 3894 ft, tested mostly water with o & g, sdo; C. C. Hill 1 (326-ac), blk 4, J. L. Reviere sur A-49, rig. Sun Oil Co.'s R. S. & H. Dailey 2 (1366.7-ac), J. G. Thompson sur A-1021, lcn. **Lamar**—Dahl Bros. & Barr's Lewis-McCuistion 1 (10-ac), R. Russell sur, 1 mi ne Paris, elev 523 ft, dry & abd 1253 ft. **Leon**—Lone Star Gasoline Co.'s G. W. Lee 2, R. Hunter sur, Buffalo area, top Pecan chalk 3914 ft, dr 4200 ft. **Limestone**—A. H. Tarver et al's C. E. Herrod 1, Eli Davis sur, 2 mi ne Thornton, Pecan chalk 1812-90 ft, cored slight oil saturation 3630-34 ft, coring 3637 ft. **Navarro**—J. O. Griffith et al's R. C. Haynes 1 (110-ac), Able Parsons sur, 4 mi ne Kerens, elev 371 ft, 1st hole jkd, Pecan chalk 1678-1935 ft, Austin chalk 2530-3065 ft, Woodbine 3443-3502 ft, dry & abd. R. G. Dickson et al's A. H. Swink 1, W. Hudson sur, 3 mi s Richland, dry & abd 440 ft. Mrs. Jane Robinson et al's Fortson 1, Eli Smith sur, 5 mi ne Corsicana, elev 345 ft, Austin chalk 1346-1585 ft, top Woodbine 2185 ft, sd 2765 ft. B. T. Fearis et al's W. Montgomery-Texas Co. 1 (340-ac), I. Redding sur, 7 mi s Kerens, mim. Topaz Oil Co.'s M. Mizell 1 (74.1-ac), T. J. Chambers sur, 10 mi ne Corsicana, Austin chalk 1665-2054 ft, sand 2514-2674 ft, dry & abd. **Rusk**—John W. Merritt et al's J. M. Tipps 1, Thos. Uzzell sur, 5 mi n New Salem, elev 367 ft, top Woodbine 3887 ft, pb fr 3983 to 3923 ft, tested water & sd. **Red River**—Daniels et al's J. J. Gaston 1 (657½-ac), J. Guest sur, 2 mi s Detroit, elev 468 ft, dr 305 ft. Watters et al's J. Phamplin 1, Wm. Moore sur, 3 mi se Kanawha, elev 470 ft, Pecan chalk 78 to 85 ft, top red beds 450 ft, sd 555 ft. C. E. Whitehead et al's R. H. Ringwald 1 (56-ac), A. Moore sur, 1 mi nw Manchester, sd 280 ft. **Smith**—Hunt Oil Co.'s S. H. Bradley 1 (100-ac), Thos. P. Payne sur, A-763, Chapel Hill area, elev 460 ft, Pecan chalk 2803-3231 ft, Austin chalk 3698-3858 ft, top Woodbine 3927 ft, top Georgetown 4400 ft, top Fredericksburg 5360 ft, 1st anhydrite stringer 6465 ft, top 2nd stringer 6775 ft, massive anhydrite 7015-7259 ft, td 7528 ft, dr froze 8 ft off bottom, then parted at 3881 ft, cemented stem, flows 9 bbls 63.3 gravity distillate per hr ¼-in choke, gas 2,600,000 ft daily. Combest, Wadworth & Cox's D. Kendall 1, John Williams sur, 1¼ mi se Jamestown, co to dd fr 2794 ft. **Van Zandt**—F. A. Richardson et al's B. C. Dodd 1 (80-ac), T. W. Hutchinson sur, 2 mi s Grand Saline, elev 427 ft, sd 4278 ft.

EAST TEXAS BORDER COUNTIES

Marion—Tom Bell's Carrie Moseley 1, D. Lane sur, ran electrical tester, sd 2768 ft. Ark. Fuel Oil Co.'s Wallace Johnson 1, Alexander Johnson sur, dr 4490 ft, hd lime. **Panola**—Texas Co.'s Claude Adams 1, Thos. Cox sur, 13⅜-in csg 579 ft, 9⅝-in csg 5940 ft, elev 287 ft, top lower Marine 7792 ft, dr 8887 ft hd sand. Walters et al's Phomplin 1, W. Moore sur, set 12½-in csg 68 ft, sd 220 ft. Petroleum Heat & Power Co.'s Frost Lbr. Co. 1, Jno H. Gibson sur, lcn. J. W. Bird 1, Geo. Gallasty sur, lcn. **Sabine**—H. R. Smith's Brook Hrs. 1, Isaac Low sur, spd setting surf csg. **Shelby**—C. L. Cope's Pickering Lbr. Co. 1, English sur, rur. Vaughn Prod. Co.'s Pickering Lbr. Co. 1, Brooks sur, mim. Shelby Oil Co.'s Windham 1, A. K. English sur, cored saturation 3397-3422 ft, made 30 bbls oil, some sw pumped off, co td 3422 ft. J. C. Windham 1, nwc Shelbyville townsite, lcn. A. R. Blount's Ethel Lovett 1, block 55, Shelbyville townsite, lcn. Mallard & Locke's (formerly DeArmen & Mallard) W. E. Roller 1, J. Sullins sur, top massive anhydrite 4823 ft, dr 5747 ft. Reddett & Gray's Pickering Lbr. Co. 2, sec 237.8-ac tract, P. J. Loggins sur, 7-in csg 2920 ft, arr dr plug & test Woodbine, td 4220 ft. Richards & Holloway's Ashberry 1, G. W. Mitchell sur, owdd, td 3405 ft.

WEST TEXAS

(This report is confined to the north portion of the Permian basin)

Andrews—S. H. Forgeron et al's Lockhart-Brown 1, c ne ne PSL sec 20, blk A-41, elev 3248 ft, top anhydrite 1660 ft, salt series 1690-2720 ft, top brown lime 3995 ft, used 2000 gals acid 4483 ft, dd to 4584 ft, used 2000 gals acid, testing 2300 ft oih. R. R. Rhodes-J. D. Tompkins et al's Emma Cowden-Sinclair 1, ne ne nw T&P sec 1, blk 44, T-2-N, elev 3166 ft, top anhydrite 1630 ft, top Yates 2720 ft, top 1st lime 3810 ft, lime pay 4168-4220 ft, used 6500 gals acid, flowed 1061 bbls initial. Sinclair Prairie's E. Cowden 3, nw nw ne T&P sec 1, blk 44, T-2-N, mim. **Cochran**—Devonian Oil Co.-Honolulu & Cascade Pet. Co.'s Duggan 1-C-8, ne c labor 8, league 54, Oldham CSL sur, elev 3647 ft, top anhydrite 2310 ft, top Yates 2920 ft, top brown lime 3860 ft, top solid lime 4237 ft, pay 5003-51 ft, used 3000 gals and 4000 gals acid and flowed 18 bbls per hr. The Texas Co.'s D. S. Wright 1, near swc labor 23, league 115, Potter CSL, dk. **Dawson**—Ray Albaugh et al's Dewey Hogg 1, c se se T&P sec 17, blk 34, T-4-N, elev 2895 ft, top anhydrite 1550 ft, dr by tools 4125 ft. **Floyd**—Mills Bennett Production Co.'s Thos. Montgomery 1, nec F. J. Latham sur 2, A-520, elev 3129 ft, top lime 3255 ft, lost dp at 5082 ft, pb to 3000 ft, dr by junk, td 5960 ft. fsh dp and cas, may abn. **Gaines**—R. C. Conkling, J. M. White & J. O. Hughes' King 1, n½ sec 6, Dawson CSL sur, lcn. Eastland Oil Co.'s R. C. Dunbar-Stanolind, nw nw sw PSL sec 24, blk A-12, elev 3544 ft, top anhydrite 1620 ft, top Yates 2882 ft, top brown lime 3730 ft, top white lime 4325 ft, td 4640 ft, used 9000 gals acid, tested little oil with water, dry & abd. J. T. Perryman et al's C. H. Doak-Pure 1, c nw ne D&W sec 43, blk H, elev 3165 ft, top anhydrite 2152 ft, top salt 2190 ft, top Yates 3153 ft, top brown lime 4100 ft, top solid lime 4580 ft, tested so&g 4994 ft, dr lime 5025 ft. V. R. Riddle & Warr's J. B. Brown 1, c ne ne C&M sec 26, blk G, elev 3283 ft, top anhydrite 2316 ft, top salt 2352 ft, top Yates 3330 ft, top brown lime 4400 ft, dr 5165 ft. **Garza**—Gulf Oil Corp.'s S. P. Swenson Cattle Co. 1, c nw H&GN sec 25, blk 2, Ordovician test, elev 2274 ft, dr lime 6501 ft. **Hockley**—Gulf Oil Corp.'s Mallett L&C Co. 2, sw c labor 25, league 34, Concho CSL sur, dr 485 ft. E. T. Marion et al's P. F. Lawless 1, sw c labor 58, league 39, Maverick CSL sur, sd 88 ft. Skelly Oil Co.'s Ellwood 1, league 15, Howard CSL sur, elev 3409 ft, top anhydrite 2090 ft, top Yates 2670 ft, top brown lime 3635 ft, rust at 4290 ft. Richardson Oils Inc.'s Slaughter 2, labor 58, league 39, Maverick CSL, dr 560 ft. Penn Royalties Inc.'s P. F. Lawless 1, near sw c labor 58, league 39, Maverick CSL sur, sd 85 ft. Stanolind's Alex Slaughter 2, sw c labor 75, league 37, Zavala CSL sur, top anhydrite 2218 ft, dr 4755 ft. **Kent**—B. Dolman et al's C. V. O'Keefe 1, ne ne nw H&GN sec 50, blk 1, sd 125 ft. **Lynn**—John L. Baldridge et al's Alamo Lumber Co. 1, ne sw sw HE&WT sec 151, 6 mi w New Home, elev 3267 ft, top anhydrite 2130 ft, top San Andres lime 4170 ft, re-cem split pipe, td 4450 ft. **Martin**—W. D. Anderson et al's J. R. Vance 1, c se T&P sec 9, blk 36, T-1-S, elev 2699 ft, top anhydrite 1510 ft, top salt 1595 ft, top lime 3610 ft, dr 3705 ft. T. G. Shaw Oil Corp.'s H. N. Wilkinson 1, ne ne se sec 35, blk A, Bauer-Cockrell sur, cem sur pipe. **Yoakum**—Fred M. Allison Prod. Co.'s Bennett 1, ne sw nw sec 695, blk D, elev 3554 ft, td 5230 ft, testing after shot. R. H. Gill et al's S. J. Dixon-Gulf 1, near se c ne sec 611, blk D, elev 3632 ft, top anhydrite 2460 ft, dr 4340 ft. Gulf's L. K. Moore 1, sw ne nw sec 897, blk D, elev 3613 ft, top anhydrite 2070 ft, top Yates 2920 ft, sg 3040-50 ft, top brown lime 3900 ft, dr 4465 ft. Phillips Drl. Co. et al W. A. O'Brien 1, c se ne sec 442, blk D, J. H. Gibson sur, lcn. Shell's Dora Roberts 2, nw sw ne sec 793, blk D, elev 3691 ft, top anhydrite 2078 ft, used 8500 gals acid at 5090 ft, flowed 362 bbls initial; Roberts 3, nw se nw 793, sp.

TEXAS GULF COAST

Brazoria—Texas Co.'s Jones 1, sw of production at Manvel, H.T.&B. No. 64, dr shale 4141 ft. **Fort Bend**—Sam E. Wilson's M. T. Wood 1, Fresno, C. Haywood sur, dr shale 3447 ft. Strake's Dew 1, Sugarland, D. Bright sur, dr shale 7302 ft. Jack Frazier's Baker et al 1, Pilant Lake, Barrett and Harris sur, dr shale 1000 ft. **Galveston**—Sun's Cade 1, Bolivar, A. Dickson sur, dr shale 6350 ft. **Harris**—Commerce Oil Co.'s Meadowbrook Dev. Co. 1, w of South Houston, J. R. Harris, dr shale 2000 ft. O. W. Killam's Dodd 1, Ogburn area, W.C. R.R. No. 12, dr sandy shale 6830 ft. **Jasper**—J. G. Mayo's Cartwright 1, Legrande-Magnolia Springs area, Legrande sur, dr shale 7004 ft. **Liberty**—Sun's Jordan 1, Batson Prairie area, L. Gedruf sur, dr shale 5745 ft. Texas Co.'s Page 1, West Hardin area, J. Hanley sur, dr shale 3690 ft. **Montgomery**—E. R. Kirkpatrick's Foster Lumber Co. 1, T.&N.O. Sec 7, dr shale 5074 ft.

SOUTH TEXAS

SAN ANTONIO DISTRICT

Atascosa—Altgelt's Vanegas 1, Garza gr, wshg over ds, td 2796 ft. Hartman's Smith & Mowinkle 1, Perez sur 172, dk. Richardson's Fisher 1, blk 146, sd 835 ft. **Bastrop**—Franklin's Thaxton & Yarrington 2, Bangs sur, sd 1725 ft. Ogden & Riddle's Bunton 1, Montgomery sur, testing Dale lime 1225 ft. Teas' Grizzard 1, Graham lge, dr 2000 ft. **Bexar**—Ball & DuBose's Miller 1, sur 55, repairing pumping equipment 1372 ft. Fain, Harrison & Jenkins' Hansen 1, sur 55, dr below 1050 ft. Johnston's Brown 1, sur 55, sd 1200 ft. Noake's Oppenheimer 1, Miller sur, dr 650 ft. Rosenberg's Langdon 1, sur 48, ru. **Blanco County**—Johnson's Glasscock 1, sec 50, dr below sur csg 150 ft. **Caldwell County**—Miller's Martindale 1, sur 18, fsg 3225 ft. **Frio County**—Thomson's Land Bank 1, sur 1, pb to test Navarro snd 3725-32, td 5686 ft. **Gonzales County**—Heard, Hall & Young's Clark 1, Armistead sur, dr 1312 ft. **Guadalupe County**—Flowers' Koepp 1, Eshaurrizer sur, ru. Gallagher & Nute's Roberts 1, Darst sur, lcn. Stewart & Nye's Maierhofer 1, Forbes sur, drlg 1000 ft. Suttle's Manford 1, Smith sur, ru. **Kendall County**—Dorsey's Flannagan 1, Sweeney sur, wo larger rig, 350 ft. Millican & Norman's Werner 1, sur 781, dr below 650 ft, following w/8 in csg. **Kimble County**—Phillips' Mudge 1, sec 9, mim. Plateau's Anderson 1, Dufner sur, pumping from 1869 ft, no gauge. **Medina County**—Cromwell's Tondrie 1, Rogers sur, ran csg to 1021 ft, td 1105 ft, prep acidize. McCallum, Forber & Johnson's Riff 1, sur 325, dr 750 ft. Pepper & Taylor's Saathoff 1, sur 231, dr 975 ft. Stieren's Hoeglin 1, sur 335. Walker's Riff 1, sur 42, sd 815 ft. Ziegler's Weimers 1, sur 274, dr 500 ft. **Milam County**—Fuchs' Stork 1, Delgado sur, sd 800. Morgan's Johnson 1, Acosta sur, dr 1960 ft. Western Gulf's Battle 1, Leal sur. **Wilson County**—Stapper's McDaniel 1, Manchaca sur, sd 2350 ft.

CORPUS CHRISTI DISTRICT

Bee County—Dirks' Robertson 1, Davis sur, dr 1700 ft. **Calhoun County**—Hiawatha's Roemer 2, Ogsberry sur, dr 3000 ft. Bunte's Crews 1, De Leon sur, cor below 3900 ft. Echols' Powers 1, Avery sur, ru. Sun's Shaper 1, Payne sur, prep sp. **Hidalgo County**—Harding-Pantana's Woody 1, Kelly-Pharr sub, por 69, cor 6915 ft. Phillips' Flores 1, por 39, fighting heaving shale, 5780 ft. Smith's Fairbanks & Young 1, por 46, sd 2540 ft. Wheelock & Collins' Temple 1, La Blanca & Llano Grande grants, hole crooked, pb to 300 ft, dr below, otd 1160 ft. **Jackson County**—Dorrance's Guethlin 1, York sur, dr 1700 ft. **Jim Wells County**—Bennett's Perkins, La Vaca gr, prep recore 5300-ft snd, in sd/tr hole, otd 5658 ft. Callaway, Matthews & Pan American's Cook 1, La Vaca gr, ran tbg, testing, perfs 5170-80 ft, td 5500 ft. Coates' Stillwell 1, blk 16, Collins subd, dr below 2700 ft. Echols' Balzen 1, sur 142, woo, 5259, ran electrical formation tester. Humble's Adams 1, M. Lopez gr, dr below sur csg set at 2526 ft. Magnolia's Valades 1, La Anima Sola gr, td 6390 ft, cutting out ds. Shell's Von Blucher 1, Best sur, dr 2000 ft. **Kleberg County**—Pure's State 1, submerged tr 522, cor below 7400 ft. **Live Oak**—Adair's Schultz 1, sur 134, dr below 550 ft. Holland & Smith's Bonham 1, tr 3008, blk 95, cor 1614 ft, Ezzell snd 1603-14 had no show. Hotchkin's Schultz 1, Haughy sur, cor below 1370 ft. Lomak's Reed 1, sur 15, dr 1900 ft. Tetbo's Y'Banez 1, tr 505, ru. Wallace & Jones' Burrows 1, Smith sur 138, ru. **Nueces County**—Seaboard's Lockett 1, E. Villareal gr, ru. Union's Brown 1, Fuentes sur, woo, heaving sh at 9615 ft. Union's Simmonds 2, Agua Dulce gr, sl, 4852 ft. **Refugio County**—Allen's Rooke 2, sec 46, Bonnie View subd, dr below 6600 ft.

LAREDO DISTRICT

Duval County—Arkansas' Cuellar 2, sec 96, td 5500 ft, woo. Foster's Foster 1 ,sur 268, cor below 1515 ft. Graf's Vaello 1, sur 24, cor below 2700 ft. Gravis' Megerle 1, sur 245, resumed dr 2450 ft; Schallert 2-A, sp. Magnolia's Duval Ranch 1, sec 280, cor for 2000 ft snd. Schimmel's Murphy 1, sur 110, dr 1500 ft. Standard of Texas' D. Garcia 1, Concepcion gr, dr below 3600 ft. **Jim Hogg County**—Humble's Bass 2, San Rafael gr, Fisher's Pugh 1, sur 93, ru heavier rig, 780 ft. Garner's Yeager 2, sec 8, Wallace subd, lcn. **McMullen County**—Alaska-Tex's Franklin 1, Poitevent sur, sd, woo, 3030 ft. Boysen & Jones' Nueces 3, sur 229, lcn; Nueces 4, sur 1, lcn. Bridwell's Nueces 1, sur 489, mim. Schimmel's Kountz 2, sur 5, dr 300 ft. Shumway & Burns' Shiner 1, Grist sur, sd 1475 ft. Spice's Edrington 1, sur 57, lcn. Wagner's Hagist 1, Mills sur, sp. **Starr County**—Hall's Guerra 1, por 69, dr 300 ft. Henshaw & Eastern's Stalley 1, por 88, cor below 2700 ft. Sun Rise's Calderoni 1, por 80, dr 800 ft. Wheelock & Collins' Guerra 1-A, sh 20, Santa Cruz gr, td 7010 ft, perf csg to test higher snds. **Webb County**—Houser's Garcia-Villareal 1, sur 720, reinstated 2524 ft, testing thru perfs 2494-98 ft. Thompson & Lowe's Ramirez 1, por 18, drlg 725 ft.

MONTANA

Carbon—R. C. Tarrant's Fee 1, c sl se nw 3-6s-18e, dr 2291 ft. **Teton**—Gulf States Oil Co.'s Wallenstein 1, sw sw sw 5-27n-5w, Pendroy Dome, dr 500 ft.

NEBRASKA

Scottsbluff—Houston Petroleum Corp.'s Judd 1, ne c ne 15-22n-57w, Bald Peak, br. **Sioux**—Union Oil Co.'s Buckley 1, ne c se se 15-26n-55w, coring at 6700 ft.

COLORADO

Archuleta—Pagossa Oil & Development Co.'s Macht 1, 32-36n-1w, running 6¼-in csg 1455 ft. **Fremont**—Stanley Thomas' Rickwalt 1, se ne 2-19s-70w, dr 480 ft. **LaPlata**—Nick Spatter's Bryce 1-X, se sw sw 31-33n-9w, dr 400 ft. **Mesa**—Continental Oil Co., California Co. & Amerada Petroleum Corp.'s Miller 1, sw sw nw 36-8s-91w, dr 4200 ft, Mancos shale. **Montezuma**—Coon & Teague's West 1, se nw ne 31-36n-17w, dr 4600 ft. **Park**—South Park Oil Co.'s Lemarr 1, ne ne se 34-11s-75w, dr 5875 ft. **Prowers**—Continental Oil Co.'s Rosabelle Ruby 1, c ne nw 31-21s-44w, dr 4165 ft.

UTAH

Grand—Cane Creek Oil Co.'s Government 1, nw sw 31-26s-21e, fsg 1397 ft. Crescent Eagle Oil Co.'s Brendell 1, sw se 4-22s-10e, dr 3965 ft. **Summit**—Mountain Fuel Supply Co.'s Wilde 1, ne c ne se 9-2n-5e, dr 1729 ft.

WYOMING

Carbon—Cunningham Oil Co.'s Union Pacific Cronberg, ne se ne 7-23n-79w, 55,000,000 cu ft gas daily at 2232-2287 ft. **Unita**—Stove Creek Oil Co.'s Government 1, se nw 26-14n-119w, dr 1400 ft.

THE RIGHT PACKING in the Right Place!

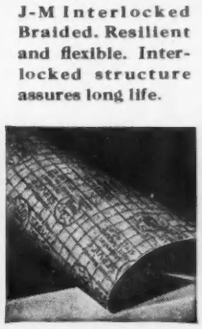
J-M Sea Rings. Absolutely automatic. Save power. Reduce wear on equipment. Last longer.

J-M Interlocked Braided. Resilient and flexible. Interlocked structure assures long life.

J-M Centripac. Plaited construction. Specially designed for centrifugal service.

J-M Flax Packings available in various styles to meet a wide variety of service conditions.

J-M Kearsarge Boiler Gaskets assure a perfect seal on handholes, manholes and tube plates.



J-M Service Sheet. Pliable. Resilient. Adaptable to all general sheet packing purposes.

J-M Mogul Packing. An excellent utility packing for general service.

FOR *complete* information on J-M's *complete* line of packings for the oil industry, send for the J-M Packings Catalog. Address Johns-Manville, 22 East 40th St., New York City.

Johns-Manville PACKINGS

For Every Oil Industry Service

JOHNS MANVILLE JM PRODUCTS

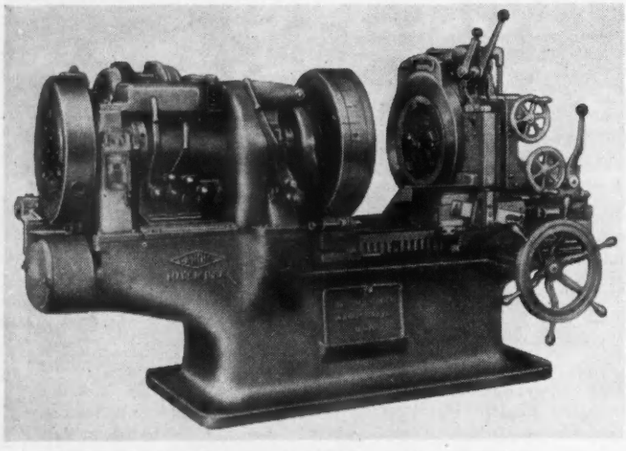
NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Equipment

PIPE THREADING MACHINE
Landis Machine Company

Landis Machine Company, Waynesboro, Pa., has added another pipe threading and cutting machine with receding chaser die head to its line of threading equipment.

This machine, identified as the 4¾-inch receding chaser pipe threading and cutting machine, has a capacity from 1⅝-inch O.D. to 4¾-inch O.D. It will generate a tapered pipe thread of any length up to and including 5-inch, and it will cut all tapers regularly used for plain pipe, and oil well casing, tubing, and drill pipe, on all sizes within its range.

The receding chaser feature of pipe threading and cutting machines of this type greatly reduces the cutting strain on the chasers to assure maximum chaser life, accurately tapered threads, and threads of excellent finish. It also permits the use of a very narrow chaser which lowers the initial cost of the chasers to approximately 50 percent of the cost of wide chasers which are ordinarily used for long tapered threads.



Landis Pipe Threading and Cutting Machine

The die head which is used on the machine is accurately graduated for all pipe sizes within its capacity. It has a universal adjustment for size, and in addition there is a micrometer adjustment which makes it possible to obtain an extremely accurate setting. The graduations on the micrometer adjustment are spaced to give a variation of exactly .001-inch on diameter. The die head is equipped with a roughing and finishing mechanism. Both the roughing and finishing cuts can be made without any diametrical adjustment of the die head. The chaser holders of this head can be adjusted independently toward or away from the center of rotation to assure an equal distribution of the cut.

The taper which is generated on the receding chaser pipe machine is controlled by a sine-bar. The sine-bar is quickly and easily adjusted for all tapers and it assures uniform taper throughout the length of the thread. The sine-bar is located positively, for all tapers by means of a tapered dowell pin.

The forward travel of the die head onto the work is controlled by means of a lead screw. The leadscrew is located centrally between the guides of the machine. It has a coarse pitch thread with a rounded crest to facilitate the engagement of the nut and to insure maximum life. An additional feature of this leadscrew, and one which doubles the life of the screw, is its reversibility. When one end of the leadscrew becomes worn through use, to the extent that the lead is not properly controlled, it can be reversed in its position to permit the use of the opposite end. Thus the full length of the leadscrew is usable.

As the die head advances onto the pipe, the sine-bar engages a retarding bracket on the side of the machine, thus actuating the taper mechanism. Since the length of the pipe extending in front of the chuck may not be constant, unless a work-stop is employed, the sine-bar retarding bracket is designed to be adjusted quickly to any desired location. An automatic safety device releases the sine-bar retarding bracket should the operator neglect to open the die head at the finish of the thread.

The leadscrew nut is of the split type. It is made of bronze and is in two segments. It is mounted on a steel carrier which is integral with the carriage. The leadscrew segments have direct contact and take the thrust load directly from the carriage. The leadscrew nut is engaged by hand but is released automatically at the end of the cut. A central reservoir located on the top of the carriage lubricates the leadscrew automatically. A pitch indicator is provided to assist the operator in correctly engaging the leadscrew nut where a second, or finishing, cut is to be made.

One leadscrew will handle all the thread pitches which can be cut on the 4¾-inch receding chaser pipe machine. The various feeding speeds required are obtainable by means of pitch change gears which are housed in a gear box on the headstock end of the machine.

The machine has a self-contained coolant system. The cutting coolant is directed to the cutting edge of each chaser through ducts located within the head body. An ample volume of coolant is provided to insure maximum cutting efficiency for the chasers.

CENTRIFUGAL EJECTOR PUMPS
The Continental Supply Company

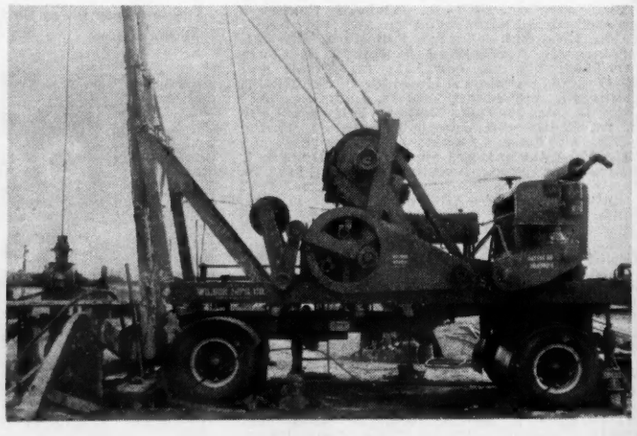
The Continental Supply Company, Continental Building, Dallas, Texas, has recently announced a new complete line of Fairbanks, Morse & Company's centrifugal ejector pumps, the principal features of which are simplicity and economy.

These units require no lubrication and have no moving parts below surface except a foot valve. They are offered either with motor-driven or V-belt driven heads. Pressure tanks are offered as optional and while the engine-driven units are manually operated, the electric motor-driven units can be ordered with automatic start-stop pressure switch. With the elimination of the ejector feature from these units, an efficient, vertical centrifugal pump for shallow wells is had.

TRAILER
Hobbs Manufacturing Company

Hobbs Manufacturing Company, Fort Worth, Texas, has recently developed a new heavy-duty trailer, known as the Tripl-Tuf Trailer. Releasing a heavy truck or tractor for other use during well servicing is one of the economies of this trailer. In heavy going the trailer can be quickly unhitched and then towed off the soft spots after the truck or tractor reaches firm ground.

Other advantages of permanently mounting equipment on these trailers include less chance of damage to units

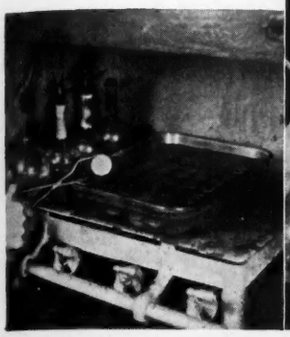


Hobbs Trailer

PUMP LIFE LENGTHENED HERE . . .

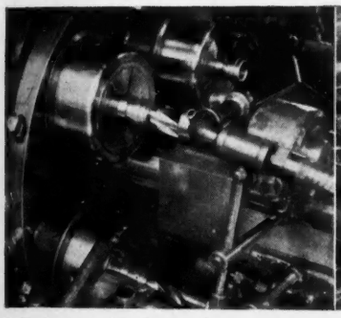
Twenty to sixty thousand times a day at least two balls—and often four—smack down on their seats in a deep well pump. It takes something to stand these shocks day after day, month on month. Add sand, shale, sulphides or other abrasive or corrosive conditions, plus the pressure of the fluid column and temperature, and the job of a seat and ball becomes as tough as anything in mechanics.

Axelson Seats and Balls have faced these conditions for forty years and met them successfully, step by step, as wells went deeper and jobs grew harder. Knowing the conditions in different oil fields and different wells, Axelson selects materials, proves processes, determines sizes and hardnesses, to meet any pumping requirement anywhere. A few of the operations and precautions in making seats and balls that lengthen pump life are shown here. An illustrated booklet is available on request.

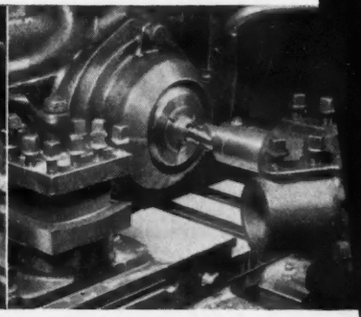


1. Hot acid test on solid bar stock.

2. Chemical test on bar stock.

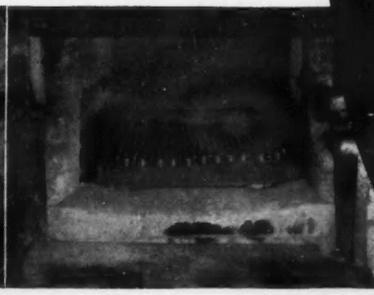


3. Turning seats from bar stock.



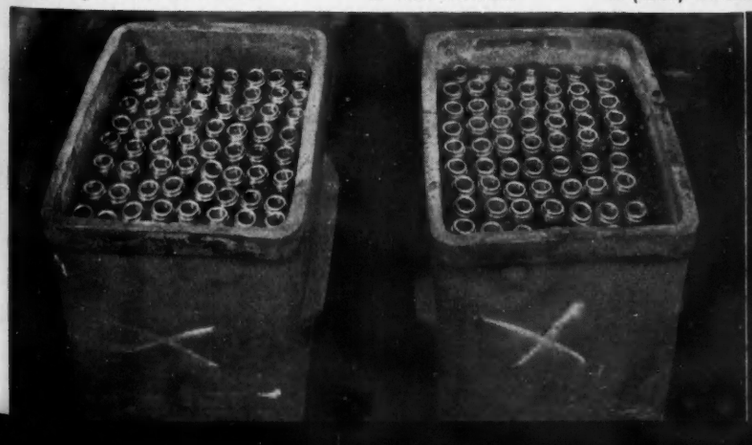
4. Facing seats on cut-off ends.

5. Inspecting for correct dimensions.

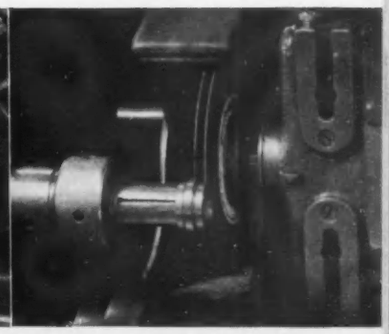


6. Heat Treatment.

7. (Below) Carburizing seats.



8. Centerless grinding.



9. Finishing flanges.

10. Lapping balls individually to mating seats.

11. (Below) Testing to 28-point vacuum.

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

AXELSON

DEEP WELL PLUNGER PUMPS • SUCKER RODS

AXELSON MANUFACTURING COMPANY — P. O. Box 98, Vernon Station, Los Angeles • St. Louis • 50 Church Street, New York • Tulsa

Mid-Continent and Eastern Distributor: Frick-Reid Supply Corporation

Rocky Mountain Distributor: Great Northern Tool & Supply Company

Foreign Representatives: "COSMOS" Soc. in Nume Colectiv, Bucharest, Roumania • *Direct Factory Representative,* Bucharest, Roumania • Industrial Agencies, Ltd., San Fernando, Trinidad, British West Indies *Factory Representative,* Maracaibo, Venezuela • Armco International Corp., Buenos Aires, Argentina

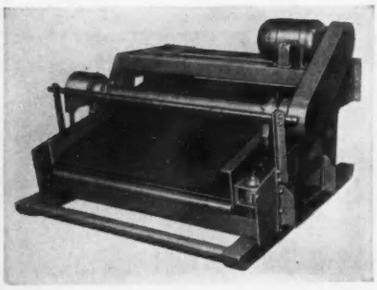
that do not have to load and unload for each move, a big saving in tractor-hour costs compared to moving the ordinary spudder, and the use of a smaller truck for pulling the trailer than would be necessary to carry the same load.

The series of Tripl-Tuf trailers made by the company includes capacities from 16,000 up to 70,000 pounds. They have been used for mounting unitized draw works, spudders, portable rotary drilling rigs, acid tanks, mud hogs, and other unitized equipment. Eight-foot tire spacing, outside to outside, gives them a wide base like a pyramid. Other reasons they should never turn over include maximum frame width and springs that are flat when loaded.

SHALE SHAKER

Allis-Chalmers Manufacturing Company

Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, has recently come out with an improved "44" shale shaker, or mud screen, a complete unit consisting of a welded steel frame into which is incorporated a set of supporting skids, a mud box into which the screened mud is delivered and a screen member of unique design. The surface of the cloth is crowned lengthwise of the screen and is horizontal across the entire width of screen which means an even load over entire width. By crowning the screen lengthwise a variable angle of inclination is made possible. In this way the feed end of the screen, which receives the mud at considerable velocity, slows it up sufficiently for efficient screening. The increasing slope toward the discharge end carries the oversize particles quickly over the end of the screen into the shale pit.



Allis-Chalmers "44" Shale Shaker

The screen cloth is fitted with hook strips at each end and held tight by spring tension. It is only necessary to loosen two bolts to remove each section of screen cloth. The screen body is supported at its four corners on resilient steel and rubber members and is vibrated by adjustable off-center weights located at each side of the screen. The bearings are highest grade anti-friction type, sealed against infiltration of mud or dust.

BEVEL GEAR

Condenser Service & Engineering Company

Condenser Service & Engineering Company, Hoboken, New Jersey, announces a new universal bevel gear which combines simplicity, ruggedness, strength and wide range of transmission use. The efficiency of transmission is about 95 percent at all angles and the gear's installation is recommended where a minimum number of joints is desired.

It is claimed that one universal bevel gear replaces two and sometimes three universal joints having restricted transmission angles. Another feature of this gear is the elimination of corrosion under outside weather conditions and that no oil is required unless operation is continuous.

NATURAL GAS FILTER

Ensign Carburetor Company

Ensign Carburetor Company, Los Angeles, has developed a new gas filter for natural gas engines, which was designed for installation in the gas supply line, to filter out any foreign matter that might be present.

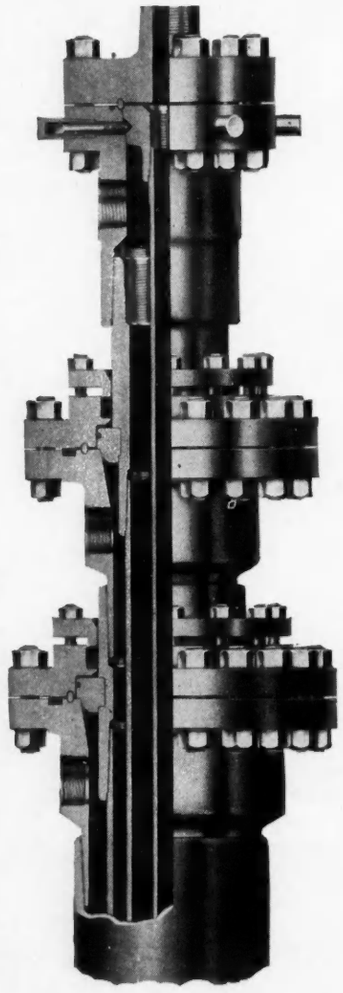
Ensign Filter

This filter is so constructed that it may be installed in a vertical or horizontal pipe line. The filtering element is easily removed for cleaning or replacement. It is made in two sizes for installation in 1- and 2-inch pipe.

EXTENDED RECESSED COUPLING

Rector Well Equipment Company

Recor Well Equipment Company, Fort Worth, Texas, now manufactures an extended recessed coupling which gives the combination of Rector casing head and Rector tubing head the effect of an integral unit. This recessed coupling embodies the exact principle of the recessed coupling in Rector casing heads, yet is extended in length to permit screwing the tubing head directly on an outside thread, thus eliminating the use of an extra nipple under the tubing head, and thereby removing a weak point in surface control hook-ups.



This extended recessed coupling permits mounting a 10,000 pound test tubing head directly on the recessed coupling. The manufacturer explains that it retains the repackable feature of Rector Heads not feasible with spool type construction. The thread used in landing pipe is not used as a permanent connection where the extended recessed coupling is used, because the coupling also has an inside thread for landing purposes. A safety thread is provided below the Christmas-tree for unscrewing and stabbing over, in case of a wild well. On a 7-inch oil string an 8⅝-inch outside thread is provided on the recessed coupling so that a 7-inch tubing head with an 8⅝-inch inside thread may be used. On 5-inch, 5½-inch and 5¾-inch oil strings an outside thread is provided on the recessed coupling, either V-type, rounded, or any of the customary square threads, at the purchaser's option.

The extended recessed coupling makes the combination of Rector casing head and tubing head far more compact and rigid.

PORTABLE DRILL

Sullivan Machinery Company

Sullivan Machinery Company, Woodland Avenue, Michigan City, Indiana, has recently placed on the market a new portable drill, known as the No. 51.

This drill has been designed primarily for slim hole production drilling and deep structure testing. It is mounted complete with folding derrick on either motor truck, automotive trailer, Caterpillar wagons or skids. It combines the simplicity and strength of the rotary rig with the sensitive hydraulic control of the core drill. The hydraulic feed mechanism can be completely retracted from over the rotary table when feeding off the line is desired. Change from hydraulic feed to weight feed can be made in a few seconds.

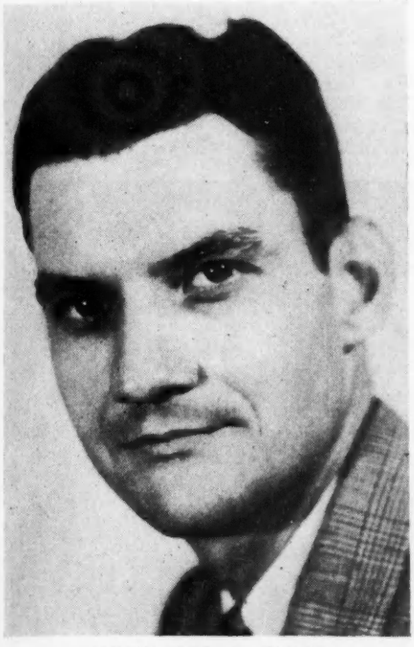
Additional features include planetary type draw works gearing with self equalizing dual band type brakes, a high-speed sand reel, dual mud pumps, dual oil pumps, centralized sensitive control for the hydraulic feed, rotary table with two piece kelly drive bushings removable to make way for standard slips, anti-friction bearings throughout. Twin power units, a three-speed transmission and multiple-disk clutches on all drives permit the most flexible power application ever built into a drill of this type.

The drill is capable of drilling to 4000 feet for 3½-inch casing, 2500 feet for 4¾-inch casing, and 1800 feet for 6⅝-inch casing.

This Week with the Industry's EQUIPMENT SUPPLIERS

Herschel J. Wood Joins Elastic Stop Nut Corporation

Herschel J. Wood, formerly with Gardner-Denver Company in the Gulf Coast area of Texas and Louisiana, now is in charge of sales for Elastic Stop Nut Corporation in Oklahoma, Kansas, Louisiana, South Arkansas and Texas. He will make his headquarters at Houston, where the company recently enlarged its stock in a warehouse maintained in the M & M Building. This stock is to serve the Gulf Coast and Mid-Continent areas.



HERSCHEL J. WOOD

Ralph L. Fesemyer Joins Jones & Laughlin Wire Unit

Ralph L. Fesemyer has been appointed Mid-Continent representative of the Gilmore Wire Rope Division of Jones & Laughlin Steel Corporation. He has been in the oil industry 22 years, first with the Gypsy Oil Company, later with the Williamsport Wire Rope Company and with Bethlehem Steel Company.

The Gilmore Wire Rope Division of Jones & Laughlin Steel Corporation has its plant at Muncy, Pennsylvania, and will be under the supervision of Robert Gilmore.

Longest String of Welded Well Casing Is Set

The longest string of welded casing used to date was set recently by Carter Oil Company in their Carter-Harley 1 near Milroy in Carter County, Oklahoma. The length of the string was 8100 feet.

National Tube Company's 7-inch OD, 26-pound, range 3, special casing was used. Two types of joints were welded, the "U" bevel on plain end pipe and the "V" bevel, commonly used on

The above photograph, taken in front of the company's general office at the plant at Dallas, Texas, shows field representatives and executives of The Guiberson Corporation gathered together recently for a sales conference. Shown in the picture, left to right, are: Standing—J. C. Owen, West Texas-New Mexico; C. L. Forcum, South Texas; G. P. Thomson, East Texas; H. M. Haseltine, general manager; S. A. Guiberson, Jr., president; Gordon G. Guiberson, sales manager; H. U. Garrett, assistant sales manager; A. Pranger, chief engineer; M. H. French, Oklahoma-Kansas; and N. H. Anderson, Central West Texas. Seated—Frank Denman, Jr., West Texas-New Mexico; Don Whittenberg, East Texas; E. D. McMurry, North Louisiana-Arkansas; I. H. Buck, pump sales engineer; R. E. Kenngott, South Louisiana; and Werner Henke, pump service engineer.

Standco
NO-SMOKE
STANDCO BRAKE LINING
Nothing novel—no bunk—but it gets the job done without scoring brake rims. See page 1940, Composite Catalog.
Standard Brake Lining Co.

YOU DRILL . . . WE'LL FURNISH the MACHINERY and DRILL PIPE . . .
All thoroughly reconditioned in our own shop . . . for SALE or RENTALS. Call or wire for prices.
NEAL LUCEY COMPANY
2107 QUITMAN ST.-PRESTON 9614
HOUSTON, TEXAS

William M. Barret, Inc.
Consulting Geophysicists
Specializing in Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

THE FORT WORTH LABORATORIES
Analyses of oil field brines, cores, gas, oil, and minerals. Field gas testing. R. H. Fash, Vice-President; Long distance 138. 828½ Monroe Street, Fort Worth, Texas.

PATENTS
Patents, Trade Marks, Copyrights and Infringement Litigation
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Capitol 9756 Houston, Texas

HOARD EXPLORATION COMPANY
Seismograph Surveys
618 Esperson Bldg.
Houston Texas

JACK A. SCHLEY
Patent Attorney
(Established 1902)
PATENTS—INFRINGEMENTS—OPINIONS
San Antonio—Washington, D. C.
906-7 SECOND NAT'L BK. BLDG.—HOUSTON
1807-11 TOWER PETROLEUM BLDG.—DALLAS

MAILING LISTS
Of The Oil Industry
Up-to-Date — Guaranteed
OIL INDUSTRY MAILING LIST CO.
909 Tulsa Loan Bldg. Tulsa, Okla.

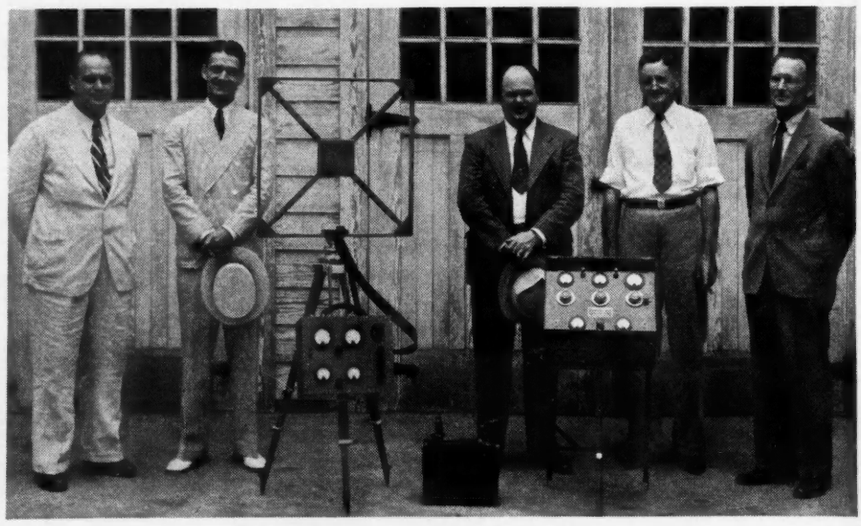
Officials of Harnischfeger Corporation, Milwaukee, together with those of the company purchasing the crane, look on while Ben Van Horn attaches the number plate to the 10,000th overhead traveling crane produced by the company. The crane in question has 100-foot span, 40 tons capacity and an auxiliary 10-ton hoist.

shorter strings. The welding equipment used included "Shield-Arc 85" electrodes and 300 ampere dual continuous control arc welders supplied by The Lincoln Electric Company, Cleveland, Ohio.

L. R. Hodell of the Carter Oil Company supervised the job, with Boris Robinoff and H. M. Cooley of National Tube Company and R. L. Looney, welding engineer for Big Three Welding Equipment Company and Lincoln Electric Company, also on the derrick floor.

The job was completed successfully without encountering any difficulties. In testing after the casing was set, pump pressure was built up to 1200 pounds and allowed to stand for 45 minutes, at the close of which period the pressure had not diminished, indicating beyond all doubt that the work was a success.

R. W. Kirkpatrick, division superintendent, with Glen Howard, welding foreman of Carter Oil Company and R. L. Looney, closely inspected the work to make sure that all welds had 100 percent penetration and a neat appearance.



Reading from left to right: Dr. Irnack Carvalho do Amaral, chief of the commission investigating geophysical methods for use by the Brazilian government; Wm. M. Barret, president, William M. Barret, Inc.; Mark C. Malamphy, consulting geophysicist for the Brazilian government; Clarence Clement, engineer, and Randolph Mayer, geophysicist for William M. Barret, Inc. The Brazilian representatives are shown at Shreveport, Louisiana, inspecting electrical equipment recently developed by the Barret organization for geophysical prospecting.

Arc welding 8100-foot well casing

Hughes Tool Company Wins Two Patent Infringement Suits

On July 1, 1938, the United States Circuit Court of Appeals for the tenth circuit at Denver, handed down two decisions in favor of Hughes Tool Company in the cases of *Chicago Pneumatic Tool Company vs. Hughes Tool Company and Southwestern Tool Company vs. Hughes Tool Company.* The Chicago Pneumatic Tool Company case was an appeal from a decision of the District Court of the United States for the Western District of Oklahoma, same being a suit brought by Hughes Tool Company alleging infringement of its Patent No. 1647753.

The circuit court, speaking through Judge Bratton, held that the patent was valid and infringed by Chicago Pneumatic Tool Company. Chicago Pneumatic Tool Company also contended that rock bits of its manufacture did not infringe on the patent inasmuch as the teeth on the Chicago Pneumatic cones did not interfit with the rows of teeth on adjacent cones, but the court held that it was not necessary that the rows of teeth interfit in order to constitute infringement, since the patent described not the interfitting teeth but the shape and form of the teeth on the cone; that is, . . . "long, narrow, chisel-shaped, penetrating teeth arranged in circumferential rows around the cone. . . . and the drawings and specifications do not present warrant or occasion for limiting the patent to a structure having interfitting teeth."

With respect to infringement on the part of Chicago Pneumatic Tool Company, the court held that, ". . . the departures from the claims in respect to the shape and form of the teeth are colorable and without change in principle. As such they do not avoid infringement. The departure from the disclosure of the patent is merely colorable . . . An insubstantial departure from the patent without change in principle does not avoid infringement."

The decree of the United States District Court for the Western District of

Oklahoma restraining Chicago Pneumatic Tool Company from further infringement and ordering an accounting was affirmed.

In the Southwestern Tool Company case there was involved the question as to whether acts done by Southwestern Tool Company were permissible repair or whether such acts were a reconstruction and infringement of three Hughes Tool Company patents. The facts showed that Southwestern Tool Company reconstructed teeth by welding. This work was done on worn cones manufactured by Hughes Tool Company.

The court said: "The defendants . . . add new teeth to the cutters. They furnish parts that are specifically covered by the patents and then sell the cones for reuse. That is well outside the domain of permissible repair and restoration and plainly constitutes infringement."

The circuit court also held that under the evidence the president of the defendant corporation was jointly liable with the corporation for the damages resulting from the wrongful acts of infringement.

In this case the decree of the United States District Court for the Western District of Oklahoma restraining further infringement on the part of Southwestern Tool Company and ordering an accounting, was affirmed.

Bovaird Appointed Union Gas Separator Distributor

Bovaird Supply Company has been appointed exclusive distributors in Oklahoma, Kansas, the Texas Panhandle and North Texas for the Union Automatic Gas Separator, and will maintain field stocks at its various branches.

This new separator is said to operate on high pressure at low cost and maintenance. It is available for installations involving high line pressures and moderate quantities of fluid, and is particularly useful in distillate extraction. It has no outside working parts or packing glands. Seamless steel pipe and cast steel flanges are used in its arc welded construction.

C. G. Colwell, who has been branch manager of Mid-Continent Supply Company at Lisbon, Louisiana, has been transferred to the Tulsa division of the concern.

Squeaks from the Bull Wheel

Explained

Two men who had just met were standing together at a party and one of them sought to make conversation. Pointing across the room, he said:

"Can you imagine why any man would bring a woman as homely as that to a party like this?"

"Sure I can," said the other. "She's my wife and she's so homely that I brought her along so I wouldn't have to kiss her good-bye."

At the Hospital

"I came to see how mah fren Joe Brown was gittin' 'long."

"Why, he is getting along fine; he's convalescing now."

"Well, that's alright lady, I'll jes set down here and wait 'till he's through."

Reasonable Enough

"Hae ye been oot wi' your lassie again?"

"Aye, dad," replied young Angus. "Why do ye look sae worrited?"

"I was just wonderin' what the evening cost?"

"No more than half a crown, dad."

"Aye? That was no sae much."

"It was a' she had."

Final Detail

A lawyer made his way to some scaffolding where a gang was working and called for Michael O'Neill.

"Who's wanting me?" came a voice from above.

"Mr. O'Neill, did you come from Drogheda?"

"I did."

"Was your mother named Kathleen and your father Michael?"

"They wor."

"Then your Aunt Mary who married the millionaire has died leaving you a fortune."

There was a short silence and then a commotion above.

"Are you coming, Mr. O'Neill?"

"In wan minute. I'm just stopping to wallop the foreman."

( )

"Did you say your girl's legs were without equal?"

"No; I said they know no parallel."

Retort

"I wonder if I shall lose my looks, too, when I get to be your age."

"You will be fortunate if you do."

No Proof

"Madam, that child will have to pay full fare. He is five years of age."

"But he can't be. I have only been married four years."

"Never mind the true confessions; let's have the money."

All Revealed

He: "What a night, what a girl, what a moon—what a combination!"

She: "Goodnight! Is that showing, too!"

Useless Advice

"My doctor says I can't play golf."

"Didn't you know?"

Waist Motion

She: It's shameful the way you start making passes at me after half a dozen drinks.

He: What's shameful about it?

She: Wasting five drinks.

Bashful

Guide: "Now, we shall see the sarcophagus of King Tut."

Old Maid: "I think I'd better wait here."

Don't Bother About Details

The general sent for his engineer—an old-fashioned, capable road builder.

"Jim," he asked, "how long will it take to throw a bridge across this river?"

"Three days," the engineer said, after running his fingers through his hair.

"Good," said the general. "Have the draftsman make the drawings right away."

Three days later the general sent for the engineer, hardly hoping the bridge could be done so soon.

"How's the bridge?" he asked.

"Bridge is made," was the reply, "and you can march across if you don't have to wait for them pictures. They ain't done yet."

It Probably Was

A youthful rector, calling on his parishioners, arrived at a home in which there was a new baby. The proud mother exhibited the infant, and the rector was lavish in his praise of its beauty.

"How old is it?" he asked.

"Just two months old today," was the reply.

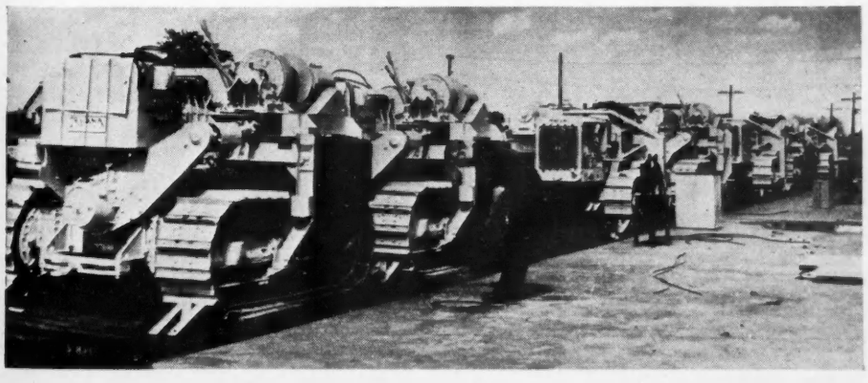
"How interesting. Is it your youngest?"

Prosit

"Give me your telephone number, Gretchen dear."

"9999."

"All right, then don't."



Pictured is part of a shipment of seven pipe layers that recently left the shops of the Trackson Company at Milwaukee, Wisconsin, for South America. They will be used in construction of a 280-mile pipe line for the South American Gulf Oil Company, subsidiary of The Texas Corporation, linking the Barco concession of Colombia to Barranquilla, port on the Caribbean Sea. The project will cost an estimated $12,000,000, the line to run through jungle, over mountains and under rivers. The concession, granted to General Virgilio Barco by the Colombian government in 1905, consists of 1,200,000 acres.

INDEX TO ADVERTISERS

	Page
J. S. Abercrombie Co.	—
Abercrombie Pump Co.	—
Ajax Iron Works	—
Allsteel Products Manufacturing Co.	3
Alten's Foundry & Machine Works	—
American Airlines, Inc.	—
American Assn. of Petroleum Geologists	—
American Cable Division	—
American Cast Iron Pipe Co.	—
American Chain & Cable Co.	—
American Hammered Piston Ring Division of Koppers Co.	—
American Iron & Machine Works Co.	—
American Lubricator Co.	—
American Meter Co.	—
American Roller Bearing Co.	—
American Sand-Banum Co.	—
American Steel & Wire Co.	—
Athey Truss Wheel Co.	—
Atlas Ball Co.	—
Atlas Supply Co.	—
Axelson Manufacturing Co.	77
Baash-Ross Tool Co.	—
The Babcock & Wilcox Tube Co.	—
Baker Oil Tools, Inc.	—
Baldwin-Duckworth Chain Corp.	—
Bantam Bearings Corp.	—
Baroid Sales Co.	37
William M. Barret, Inc.	79
Bartlett-Hayward Division of Koppers Co.	—
Beaumont Iron Works Co.	—
Bethlehem Steel Co.	—
Black, Sivalls & Bryson	—
Blackstone Hotel	—
Braden Steel Corp.	70
Bradford Motor Works	—
The Brance-Krachy Co.	—
The Brewster Co.	—
The Bridgeport Machine Co.	42
Broderick & Bascom Rope Co.	—
Buckeye Traction Ditcher Co.	—
The Buda Co.	—
Bull-Stewart Equipment Co.	—
A. M. Byers Co.	—
Byron Jackson Co.	—
Jo H. Cable	—
Cameron Iron Works	—
Carnegie-Illinois Steel Corp.	—
J. I. Case Co.	—
Caterpillar Tractor Co.	21
The Cavins Co.	—
Chain Belt Co.	—
Hotel Chalmette	71
Chiksan Oil Tool Co.	—
Clark Machine Co.	—
Climax Molybdenum Co.	—
Columbian Steel Tank Co.	—
Continental Oil Co.	—
The Continental Supply Co.	5
Fred E. Cooper Co.	—
The Cooper-Bessemer Corp.	—
Crane Co.	—
Cummins Engine Co.	—
W. H. Curtin Co.	—
Darling Valve & Manufacturing Co.	—
The Dayton Rubber Mfg. Co.	—
Deckard Manufacturing Co.	—
Dedman Foundry & Machine Co.	—
DeWitt Operated Hotels	—
Diamond Chain & Manufacturing Co.	—
W. S. Dickey Clay Manufacturing Co.	—
Dowell Incorporated	—
S. R. Dresser Manufacturing Co.	—
E. I. du Pont de Nemours & Co.	—
Eastman Oil Well Survey Co.	—
Economy Electric Lantern Co.	—
Elliott Core Drilling Co.	—
Elliott Manufacturing Co.	—
Enardo Foundry & Manufacturing Co.	—
The Fafnir Bearing Co.	—
Geo. E. Failing Supply Co.	—
First National Bank, Houston	—
First National Bank & Trust Co. of Tulsa	—
Fluid Packed Pump Company	—
Foote Bros. Gear & Machine Corp.	—
Ford Motor Co.	—
Fort Worth Clearing House Association	—
The Fort Worth Laboratories	79
The Benjamin Franklin Hotel	—
Franks Manufacturing Corp.	—
Frick-Reid Supply Corp.	—
Gardner-Denver Co.	—
The Garlock Packing Co.	71
Gas Lift Corp.	—
General Electric Co.	—
General Motors Corp.	—
General Power Co.	—
Geological Scientific Service Co.	52
Geophysical Service, Inc.	—
H. P. Gott Manufacturing Co.	—
Grant Oil Tool Co.	—
Gray Tool Co.	33
Green Head Bit & Supply Co.	—
The Guiberson Corp.	—
Gulf Coast Machine & Supply Co.	—
Gulf Envelope Co.	—
Gulf Publishing Co.	—
Gulf States Utilities	—
Gustin-Bacon Co.	—
Halliburton Oil Well Cementing Co.	—
Hardway & Cathey	79
Harnischfeger Corp.	—
Haynes Stellite Co.	—
Hazard Wire Rope Co.	Third Cover
The Hercules Power Co.	—
Hercules Supply Co.	—
Hoard Exploration Co.	79
The Chas. N. Hough Manufacturing Co.	—
Houston Ready-Cut House Co.	—
Hughes Tool Co.	38-39 and Fourth Cover
Humble Oil & Refining Co.	—
Hunt Tool Co.	—
Hyatt Bearings Division	—
Hydrauger Corp.	—
Hydril Co.	6
Independent Exploration Co.	—
The Inferno Co.	71
Ingersoll-Rand Co.	—
International Derrick & Equipment Co.	—
International Harvester Co.	—
The International Nickel Co.	—
International Supply Co.	—
Jarecki Manufacturing Co.	—
Jeffrey Manufacturing Co.	—
Jensen Brothers Manufacturing Co.	—
Johns-Manville	75
The S. M. Jones Co.	—
Jones & Laughlin Steel Corp.	—
The Kennedy Valve Manufacturing Co.	—
Kerotest Manufacturing Co.	—
Kesler Manufacturing Co.	—
Keuffel and Esser Co.	—
Keystone Driller Co.	4
M. M. Kinley Co.	—
Kinzbach Tool Co.	—
Koppers Co.	—
Kropp Forge Co.	—
Laminated Shim Co.	—
Landis Machine Co.	—
Lane-Wells Co.	—
Larkin Packer Co.	—
The Layne & Bowler Co.	—
Lee Rubber and Tire Corp.	—
LeRoi Co.	—
A. Leschen & Sons Rope Co.	—
The Lincoln Electric Co.	—
Link Belt Co.	—
Lone Star Cement Corp.	—
Lord Baltimore Hotel	—
Lucey Boiler & Manufacturing Co.	—
Neal Lucey Co.	79
Ludlow Valve Manufacturing Co.	—
Lufkin Foundry & Machine Co.	—
MacClatchie Manufacturing Co.	—
MacWhyte Co.	—
D. S. Mair Machinery Corp.	—
Maloney Tank Manufacturing Co.	—
Manhattan Rubber Division	—
Martin-Decker Corp.	—
McKissick Products Corp.	—
The Medart Co.	—
Merco Nordstrom Valve Co.	—
Merla Tool Co.	—
Metric Metal Works	—
Miller Sand Pump Co.	—
Mission Manufacturing Co.	31
Lee C. Moore & Co.	—
Morse Chain Co.	—
M & V Tank Co.	—
U. C. Murcell, Inc.	—
Murray Rubber Co.	—
Hotel McAlpin	—
National Bank of Tulsa	—
National Lead Co.	37
The National Supply Co.	23
National Tube Co.	—
Naylor Pipe Co.	—
New Deal Specialty Co.	—
Hotel New Weston	—
Norvell-Wilder Supply Co.	—
Walter O'Bannon Co.	—
O.C.S. Manufacturing Co.	—
Oil Center Tool Co.	—
Oil City Brass Works	—
Oil Industry Mailing List Co.	79
Oil Well Improvements Co.	—
Oil Well Supply Co.	—
Oil-World Exposition, Inc.	—
Otis Pressure Control, Inc.	—
The Parkersburg Rig & Reel Co.	10
Patterson-Ballagh Corp.	64
Pelican Well Tool & Supply Co.	65
Petroleum Electric Power Club	—
Petroleum Rectifying Co. of California	—
Petty Geophysical Engineering Co.	—
Philadelphia Gear Works	—
Hotel Philadelphian	—
Pittsburgh Equitable Meter Co.	—
Pittsburgh Steel Co.	27
Hotel Pittsburgher	—
Plowden Supply Co.	—
Pyramid Manufacturing Co.	—
Raybestos-Manhattan	—
R-F Electrical Manufacturing Co.	—
Reading-Pratt & Cady Co.	—
Rector Well Equipment Co.	—
Reda Pump Co.	—
Reed Roller Bit Co.	First Cover and 25
The Republic Rubber Co.	—
Republic Steel Corp.	8
The Rice Hotel	—
The Ridge Tool Co.	—
Rollway Bearing Co.	—
Jack A. Schley	79
Schlumberger Well Surveying Corp.	—
Scivally Bros.	—
Security Engineering Co.	—
Seismograph Service Corp.	—
Shaffer Tool Works	—
Shell	—
SKF Industries, Inc.	—
A. O. Smith Corp.	—
E. M. Smith Co.	—
Howard Smith Co.	—
The Sonner Burner Co.	—
South Chester Tube Co.	—
Southern Engine & Pump Co.	—
Southern Pacific Lines	—
Hotel Southland	—
Spang & Co.	—
Spang Chalfant, Inc.	—
Sperry-Sun Well Surveying Co.	—
Standard Brake Lining Co.	79
Standard Pressed Steel Co.	—
Star Drilling Machine Co.	—
Sterling Engine Co.	—
Stevens Hotel	—
Templeton, Kenly & Co.	—
Texas Electric Steel Casting Co.	Second Cover
Texas Iron Works	—
Texas Steel Co.	—
Thermoid Rubber, Division of Thermoid Company	—
Thornhill-Craver Co.	—
The Timken Roller Bearing Co.	—
The Titusville Iron Works Co.	—
Tretolite Co.	—
Trinity Portland Cement Co.	—
Union Carbide & Carbon Corp.	—
Union Wire Rope Corp.	—
United States Rubber Co.	—
United States Steel Corp.	—
Universal Atlas Cement Co.	—
Wailes Dove-Hermiston Corp.	—
Warner & Swasey Co.	—
The Watson-Stillman Co.	—
Waukesha Motor Co.	4
Westinghouse Electric & Mfg. Co.	—
Wheeling Machine Products Co.	—
Wickwire Spencer Steel Co.	29
J. H. Williams & Co.	—
Wilson Manufacturing Co.	—
Wilson Supply Co.	—
Worthington Pump & Machinery Corp.	—
Worth Hotel	73
Young Engine Corp.	—
Young Radiator Co.	—
Youngstown Sheet & Tube Co.	8